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MONTHLY REPORT

OF THE

DEPARTMENT OF AGRICULTURE

FOR

JULY, 1874.



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MONTHLY REPORT.

DEPARTMENT OF AGRICULTURE,
Statistical Division, July 21, 1874.

This report contains a digest of the returns of acreage of crops for July, a record of market-prices with current results of investigation in other branches of the Department, and other matter.

J. R. DODGE,
Statistician.

Hon. FREDERICK WATTS,
Commissioner.

DIGEST OF CROP RETURNS.

CORN.

An increase in the corn area of fully 2,000,000 acres is apparent, or 6 per cent. above the breadth of last year. The percentage is largest in the South; the increase in acres is largest in the West. Returns make the gain in Iowa over 300,000 acres; in Missouri, about the same; in Illinois, about 200,000; in Indiana, fully 200,000; in Kansas, about 170,000. Georgia shows almost as large an increase as Iowa and Missouri; Alabama, 180,000 acres; Mississippi, 120,000 acres; Texas, 200,000 acres. The inducement to enlarge the corn area of the cotton States appear to have been less influential in the Mississippi Valley than in the more eastern States, Georgia particularly. The increase in Texas is simply due to the natural expansion of crop areas from immigration, and is equally noticeable in cotton and other crops.

The number of States reporting a decrease in area is small, including only Maine, New Hampshire, Vermont, Florida, Louisiana, Tennessee, West Virginia, Kentucky, and California. In Northern New England a late unfavorable spring interfered with planting, and in Louisiana the area is less by reason of the overflow.

The States making increase are as follows: Maryland, Virginia, Wisconsin, 101; Pennsylvania, Ohio, Nebraska, 102; Massachusetts, Oregon, 103; Connecticut, North Carolina, Illinois, 104; South Carolina, Michigan, 106; Indiana, 108; Iowa, 109; Mississippi, Minnesota, 110; Alabama, Arkansas, 112; Kansas, 114; Georgia, 115.

The condition of corn is generally good in the West, but elsewhere variable. The only States reporting average condition, or above, are Massachusetts of the Eastern States, Pennsylvania of the Middle States, Maryland, South Carolina, Georgia, Florida, and Texas of the Southern States, and the Western States, except Minnesota, reporting 94, and California and Oregon.

The percentages of condition above average are as follows: South Carolina, 101; Massachusetts, Florida, Michigan, Kansas, 102; Maryland, Iowa, 104; Illinois, 105; Texas, 106; Indiana, Nebraska, 109. The States averaging 100 are Pennsylvania, Georgia, Wisconsin, Missouri.

On the northern Atlantic coast the late planting and cold storms are the causes of somewhat inferior condition, though the color is generally good and present growth promising. The inundations, soaking rains, and consequent replantings in the Southern States make the appearance of corn quite variable, and account for condition below average in certain States, while in others such disadvantages, existing to a less degree, have been overcome by good culture and good weather. There is complaint of local drought, but it is not of long continuance or involving wide areas. It has been most serious in Arkansas, some counties having had little or no rain in two months. In the Ohio Valley there is some complaint of drought; in West Virginia, Ohio, and Kentucky, and in some parts of Illinois, and to some extent in States west of the Mississippi. So far the injury from this cause throughout the country is less than usual, but should the droughts existing July first be continued and intensified through the month, great injury may result. Cut-worms have been generally injurious, and chinch-bugs in the West, after devastating wheat-fields, have attacked corn vigorously in many localities.

The following condensed exhibit of remarks accompanying returns will illustrate further peculiarities of condition:

MAINE.—*York*: Too wet and cool. *Cumberland*: Not much planted; season too late and cool.

NEW HAMPSHIRE.—*Hillsborough*: Backward; injured by worms. *Rockingham*: Backward. *Belknap*: Backward.

VERMONT.—*Lamoille*: Kept back by cold and wet; poor condition. *Windsor*: Backward on account of late spring. *Rutland*: Late. *Franklin*: Kept back by late spring, but of good color. *Chittenden*: Small and backward. *Caledonia*: Smallest for thirty years.

MASSACHUSETTS.—*Berkshire*: Corn has made a good growth considering the late spring.

CONNECTICUT.—*New London*: Very promising.

NEW YORK.—*Columbia*: Planting delayed by rain and cold; crop backward. *Livingston*: Growing finally. *Rockland*: Late planted, and backward, but of good color; weather now propitious. *Montgomery*: Corn-fields grown over with weeds; a succession of thunderstorms prevented working them, especially in low lands. *Wyoming*: Stands well and looks well. *Otsego*: Backward; needs warm, dry weather.

NEW JERSEY.—*Hudson*: Late planted and backward, May and June being unusually cool. *Burlington*: Fields very clean, and weather good for cultivation. *Warren*: Looks well except some late plantings.

PENNSYLVANIA.—*Northampton*: Doing well; no replanting. *Clearfield*: About ten days late, but doing well. *Washington*: Very uneven; dry weather has given start to worms. *Westmoreland*: Suffering for rain. *Hantington*: Shortened by drought, but looks healthy. *Lycoming*: Promising. *Lehigh*: A little backward through late planting. *Indiana*: Doing well. *Lancaster*: Average increased to take the place of tobacco. *Beaver*: Very short and not growing. *Pike*: Looks well.

DELAWARE.—*Sussex*: Retarded by heavy rains early in June and by subsequent drought.

MARYLAND.—*Baltimore*: Crop in fine condition, but somewhat backward. *Washington*: Looks well. *Calvert*: Crops very favorable. *Saint Mary's*: Small, and injured by cut-worms. *Queen Anne's*: Promising, with seasonable showers.

VIRGINIA.—*Powhatan*: Being late planted, the crop shows poorly. *Rappahannock*: Wet weather has restricted cultivation. *Fluvanna*: Stand backward, but good and clean. *Warwick*: Suffering from drought. *Pittsylvania*: Prospect good. *Dinwiddie*: Looks poor; late planted and badly cultivated. *Nelson*: Looks well, but is threatened by chinch-bugs from the exhausted wheat-fields. *James City*: Small, but well worked. *Mecklenburgh*: Small for the season. *Prince George's*: Growth stunted, but healthy. *Prince Edward's*: Acreage increased by failure of tobacco-plants. *Buckingham*: Threatened by chinch-bugs. *Clarke*: Suffering for rain. *Albemarle*: Chinch-bugs. *Chesterfield*: Late, but clean and promising. *Campbell*: Looks well, but chinch-bugs are after it in places. *Henry*: Generally well tilled. *King and Queen*: Backward, but looks well. *Lunenburg*: Late, and difficult to cultivate. *Madison*: Well worked and looks well. *Westmoreland*: Backward; late planted; season

cold and wet. *Gloucester*: Badly injured by bud worms. *Henrico*: Large crop planted; short through drought. *Halifax*: Late, and suffering from drought and chinchies. *Buchanan*: Late planted. *Bath*: Looks well, but badly needs rain.

NORTH CAROLINA.—*Edgecombe*: Stand good; plants small. *Person*: Injured by drought. *Rowan*: Promising, though small for the season. *Caswell*: Late, but looking well. *Gaston*: Season favors both cultivation and growth. *Greene*: Injured by cut-worms. *Chowan*: Unusually late; small plants. *Moore*: Backward; injured by bud-worms. *Alamance*: Poor. *Haywood*: Injured by drought. *Madison*: Late, but promising. *Wayne*: About 23,000 acres planted in the county. *Nelson*: Large acreage but bad stand. *Newberry*: Promising. *Fairfield*: Crop promises to equal that of 1873. *Spartanburgh*: Uneven. *Burke*: Two or three weeks late.

SOUTH CAROLINA.—*Marlborough*: Plants look finely, but stand inferior. *Marlborough*: Little under size, but promising. *Darlington*: Better than for injured by bud-worms; crop late, but looking well. *Union*: *Edgefield*: Another good rain within ten days will make the crop in the stalk, having been injured by April frosts. *Laurens*:

very favorable. *Harris*: Looks well. *Upson*: Stalks small, late, but looking well. *Mitchell*: Crop about made. *Muskeget*: Sown up for corn. *Clinch*: Crop will be made in two weeks. *Sumpter*: Fine. *Wilkinson*: Promises a large yield. *Gwinett*: Late and small, but otherwise promising. *Wayne*: Rain becoming excessive; injured by cut-worms and then by another worm cutting the stalk off at the ground. *Hancock*: Suffering for rain. *Dougherty*: Rainy weather favorable. *Baker*: Very fine. *Cobb*: Very good. *Dooly*: Backward through early rains and late drought. *Liberty*: Fine. *Milton*: Growing fast; promises more corn than ever before. *Richmond*: Early corn injured 15 per cent. by drought. *Heard*: Fine prospect of grain-crops. *Morgan*: Not rain enough to bring up late plantings.

FLORIDA.—*Columbia*: Much improved by recent rains. *Leon*: Crop made; good where cultivated. *Jackson*: The late rains have rescued the corn-crop; sufficient for home-consumption, but none to spare. *Jefferson*: Very satisfactory. *Gadsden*: Acreage increased 10 per cent.; crop about made, and a full average yield; a surplus of old corn selling at 75 cents per bushel.

ALABAMA.—Looking very fine; excellent season. *Dale*: Low, but well-eared. *De Kalb*: Late, but promising. *Chambers*: Looks well. *Montgomery*: Promising. *Macon*: Grassy through excessive rain. *Conecuh*: Bad stands on account of the ravages of cut-worms and bud-worms. *Clarke*: Suffered first from excessive rain and then partial drought, but is doing finely. *Franklin*: Not promising; planting delayed by drought. *Lauderdale*: Very backward; stand poorest on the bottoms and upland flats; too wet. *Pike*: Damaged by drought, but fine rains lately. *Dallas*: Promising. *Perry*: Excessive rains. *Marshall*: Floods have prevented planting the best corn-lands. *Bullock*: Excellent where the land is not too wet. *Clay*: Small and poor. *Baldwin*: Excessive rains benefited upland crops, but almost destroyed bottom crops.

MISSISSIPPI.—*Amite*: Too much rain, with hail, yet the crop is of average promise. *Copiah*: Small, but clean and promising. *Newton*: Looks finely. *Warren*: Grows rapidly on recently overflowed land. *Jasper*: A month late. *Grenada*: Promising. *Wayne*: Excessive rains prevented good stands, but subsequent drought enabled planters to work it clean. *Tunica*: Great destruction by cut-worms. *De Soto*: Not large, but healthy and fine. *Lowndes*: Stands irregular. *Kemper*: Promising. *Wilkinson*: Damaged by rain in some places, and by drought in others. *Lauderdale*: Great improvement lately. *Hinds*: Well worked. *Holmes*: Backward.

LOUISIANA.—*Morehouse*: Corn six weeks late and quite irregular, though generally looking well. *East Baton Rouge*: Suffered from drought following excessive rains. *Union*: Suffered from drought; too late for great improvement. *Rapides*: Much improved, but too late to make more than the three-fourths of a crop. *Franklin*: Early corn inferior in quality; late corn mostly promising. *Cameron*: Promising. *Caddo*: Half crop; suffered from drought. *Tensas*: Planting retarded by the overflow; rain wanted. *Washington*: Injured by drought. *Richland*: Early corn in some places plowed up; late corn looks well.

TEXAS.—*Hood*: Prospect finer than ever known. *Austin*: Reduced below average by drought. *Bosque*: Good, but late. *Red River*: Great difficulty in getting stands. *Upshur*: Good. *Bee*: Only late crops benefited by the late rains. *Bandera*: Early corn killed by April frosts. *Grimes*: Shortened by drought. *Harrison*: Lack of rain will reduce the crop one-half. *Houston*: Reduced by excessive drought. *Lamar*: Very promising. *Milam*: Recent rains too late to overcome the two months' preceding drought. *Robertson*: Looks well where well cultivated, but needs rain. *Washington*: Early drought enabled the farmers to work the crop thoroughly, and later rains have insured a good crop. *Cherokee*: Retarded by wet, cold spring and late frosts; fine growing weather succeeding drought; Pennsylvania white corn, from the Department, is the best in the neighborhood. *Matagorda*: Very fine; improving rains will greatly benefit the crop. *Bell*: Generally clean,

but need rain. *Anderson*: Succumbing to drought. *Uralde*: Suffering for rain. *Laraca*: Prospects favorable. *Cooke*: Looks well, but need rain. *Marion*: Suffering for rain. *Lampasas*: Crop safe; grain fine. *Médina*: Prospective yield doubled since June. *Nacogdoches*: Short through drought. *Shelby*: Late planted, but better cultivated than last year. *Kaufman*: Promise of best crop for twelve years.

ARKANSAS.—*Boone*: Backward, but coming on finely; recent warm rains. *Franklin*: In fine condition. *Clark*: Affected by drought; good weather may raise it to 75. *Pulaski*: Much injured by eight weeks' drought; two weeks more will ruin it. *Union*: Eight weeks' drought. *Craighead*: No general rain since April 5. *Garland*: No rain for nine weeks; corn dead. *Jackson*: Rain badly needed. *Bradley*: Drought of ten weeks has cut down the corn-crop very seriously. *Columbia*: Three weeks more of drought will finish the crop; not over half a crop at best. *Independence*: Greatly damaged by protracted drought. *Hempstead*: Almost ruined by a seven weeks' drought. *Washington*: Suffered severely from drought. *Sebastian*: Farmers, during the drought, put the crop in fine order for the late genial rains. *Fulton*: Generally well cultivated, of good color, and growing finely in spite of drought. *Arkansas*: Damaged by drought and cut-worms.

TENNESSEE.—*Loudon*: Less than I ever saw it at this season of the year. *Madison*: Bad stands and looking badly on account of drought. *Lincoln*: Badly affected by drought. *Grundy*: Backward. *Sumner*: Drought since May 14, seriously affecting the crop; still of good color though very low. *Carter*: Improved by late rains. *Hickman*: Small, but healthy and growing fast. *Bedford*: Injurious drought. *Blount*: Still very small and suffering for rain in some quarters. *Hardin*: Damaged by drought. *Hawkins*: Late planted on account of wet spring; not further advanced than it usually is June 1. *Monroe*: Late planted, but growing finely; seasonable rains. *Polk*: The variable season prevented proper cultivation. *Roane*: Very backward on account of unfavorable weather at planting and now shortened by drought. *Cannon*: Drought prevented the planting of 10 per cent. of the land intended for corn. *Bradley*: Corn planted about May. It is very promising; later or earlier plantings poor. *Macon*: Small and drying up. *Maury*: Worst prospect for many years. *Montgomery*: Early corn well tended in good ground, is growing some; some seed in the hill as sound as when it was planted; result of extreme drought. *Wayne*: Very late; looks well. *Hancock*: Never looked better. *Giles*: Well worked. *Lauderdale*: Stand poor.

WEST VIRGINIA.—*Harrison*: Very backward and short. *Brooke*: Looks well; crops clean. *Monroe*: Came up badly on thin old land. *Wayne*: Drought. *Cabell*: Extreme drought; doing badly. *Hardy*: Extreme need of rain. *Marion*: Growing fast; very seasonable weather. *Morgan*: Needs rain very much. *Grant*: Beginning to suffer severely from drought. *Kanawha*: Drought. *Lewis*: Drought. *Mercer*: Short and unpromising through drought and worms. *Monongalia*: Backward, but may turn out well. *Fayette*: Drought restricted the acreage planted; it was too dry to plow.

KENTUCKY.—*Shelby*: Looks green, but grows slowly; from 12 to 18 inches high. *Boyle*: May yet make an average crop. *Franklin*: Drought. *Adair*: Will make a tolerable crop if rain comes soon. *Hardin*: Smaller than ever known at this season. *Montgomery*: Backward, but recent rains will bring it forward. *Laurel*: Late plantings of no account; early plantings look well. *Anderson*: Low and backward, but healthy; *Hopkins*: Corn lost without speedy rain. *Butler*: Color fine, but beginning to suffer from drought; not all planted yet. *Graves*: Damaged by drought and chinch-bugs. *Livingston*: Chinch-bugs very destructive. *Logan*: Looks bad; not over a half stand, and that very uneven; some fields replanted five or six times; plants range from 3 to 36 inches; ground too dry. *Marion*: Put in in bad condition, and growing slowly. *Mason*: Well-rooted, healthy, and clean. *Ohio*: Extreme heat and drought. *Mercer*: Suffering from severe drought. *Russell*: Suffering severely; no rain since April 28; probably not over a fourth of a crop. *Scott*: Not over a half-crop. *Owsley*: Gloomy prospect. *Nelson*: Drying up. *Grayson*: Light showers kept corn growing in some places. *Henry*: Looks well in some localities, but the general prospect is very unpromising; chinch-bug very destructive.

OHIO.—*Trumbull*: Abundant. *Coshocton*: Late, but looks well. *Delaware*: Good stand, well-worked, and promising. *Montgomery*: Backward through drought. *Monroe*: Threatened by the long drought, lasting from May 1. *Adams*: Threatened by drought and chinch-bugs. *Crawford*: Doing finely. *Hancock*: Surpasses all previous crops, both in acreage and condition. *Mahoning*: Injured by drought. *Marion*: Never promised better at this season. *Scioto*: Backward, and a bad stand. *Washington*: Early plantings on good ground are doing well; late plantings small, and a poor stand. *Meigs*: Suffering from continued drought. *Columbiana*: Driest season since 1854; corn-leaves rolled up like cigars; no rain since May.

MICHIGAN.—*Saginaw*: Sod-corn injured by cut-worms. *Kalamazoo*: Coming on finely; warm, with abundant rain. *Tuscola*: Looks remarkably well; growth rank and color good. *Montcalm*: Looks finely.

INDIANA.—*Madison*: Never looked better; fine rains of late. *Howard*: Prospect never better. *Decatur*: Corn lay in the ground without sprouting for six weeks; no rain from April 24 to June 25; bad stand and the chinch-bug after it. *Kosciusko*: Very fine. *Perry*: Looks badly; no rain for six weeks; chinch-bugs at work; *Pecsey*: Poor stand and late.

Putnam: Over average. *Ripley*: Growing finely and clean. *Shelby*: Chinch-bugs commencing to eat the crop. *Washington*: Improved by late rains, but threatened with the chinch-bug. *Gibson*: Uneven, small for the season. *Harrison*: Late and small; suffering for rain. *Brown*: Generally good; dry weather improved in clearing the crop; greatly improved by late rains. *Cass*: Clean and growing fast. *Clay*: Clean and of good color; some damage from chinch-bugs. *Crawford*: Threatened by chinch-bugs. *Floyd*: Promises well, but needs rain very much. *Hamilton*: A remarkably good stand, and looks well, though in some places injured by too much rain. *Jasper*: Looks well, but needs rain. *Marion*: Improved by late rains. *Noble*: Prospect never better. *Pike*: Late corn threatened by chinch-bugs. *Steuben*: Never looked better. *Wabash*: Never looked better; seasonable rains. *Tippecanoe*: Rarely had such a prospect; crops forward and well tended. *Warren*: Promises a large yield. *Whiteley*: Has done finely.

Woodly: Withering from drought. *Jersey*: Planted late, prospects exceedingly fine. *Macon*: Generations in places. *Madison*: Late, and suffering from chinch-bugs. *Mason*: Drought, and chinch-bugs injurious. Stand and greatly injured by drought and chinch-bugs. *Clark*: One-third of the acreage destroyed by *Efingham*: Injured by chinch-bugs. *Jackson*: Badly damaged by chinch-bugs. *Macoupin*: Chinch-bugs have commenced at the crop, in spite of chinch-bugs. *Richland*: In many places injured by chinch-bugs. *Morgan*: Prospects declined within two weeks. *Sangamon*: Planting stimulated by high prices. *Vermillion*: Never better. *Washington*: Late planted, and would be average but for the chinch-bugs; many fields destroyed. *Wayne*: Badly damaged by drought and chinch-bugs. *Piatt*: Chinch-bugs working hard on corn. *Perry*: Attacked by chinch-bugs; will be a failure if rain does not come soon. *Schuyler*: Threatened by the second brood of chinch-bugs.

WISCONSIN.—*Dodge*: Average on old land; sod-corn injured by cut-worms and other insects. *Douglass*: Somewhat drowned out. *Green Lake*: Somewhat injured by cut-worms. *Juneau*: Backward; but a good, even stand. *Calumet*: Late, but prosperous. *Green*: Good.

MINNESOTA.—*Steele*: Never so promising as now. *Houston*: Rather low, but advancing with the hot weather. *Olmstead*: Cold, wet weather of May and June injurious. *Sherburne*: Backward and weedy. *Jackson*: Planted late to escape grasshoppers. *Stearns*: Retarded by the cool, wet weather of early June; late rains and warmth bringing it along finely. *Sibley*: Late, but heavy. *Isanti*: Much corn injured by rain.

IOWA.—*Cass*: Especially promising. *Linn*: Looks splendidly; crop clean. *Mahaska*: Looks remarkably well; best stand for years. *Washington*: Will suffer from drought. *Clinton*: Unusually good stand; a little late, but growing rapidly. *Lee*: Never looked better. *Mitchell*: Growing fast. *De Moines*: Injured by worms; some pieces had to be replanted three times. *Harrison*: Much corn planted in place of spring-wheat. *Henry*: Corn well worked and clean, but needs rain. *Howard*: Early plantings kept clean are extra; late are about average. *Iowa*: Well tended and promising. *Taylor*: Fine weather since June 10 has greatly improved the crop. *Tama*: Good stand; unusually free from weeds.

MISSOURI.—*Caldwell*: Looks remarkably well, but is injured by chinch-bugs. *Cass*: Very seriously injured by chinch-bugs. *Vernon*: Chinch-bugs destructive. *Saint Clair*: Chinch-bugs. *Greene*: Beginning to feel the drought. *Moniteau*: Chinch-bugs injurious. *Barton*: Threatened by chinch-bugs. *Daviess*: Fine; not so rank as last year, but much better cultivated. *Taney*: Well cultivated; Pennsylvania Yellow especially promising. *Bates*: Chinch-bugs. *Benton*: Badly injured by chinch-bugs, especially on prairie soils. *Carroll*: Crop looked splendid until the chinch-bugs came. *Cape Girardeau*: Affected by drought and chinch-bugs. *Christian*: Chinch-bugs. *Clinton*: Chinch-bugs. *De Kalb*: Chinch-bugs. *Harrison*: Looks fine. *Montgomery*: Chinch-bugs very bad. *Miller*: Chinch-bugs numerous in some fields. *Perry*: Drought prevented planting on the best corn-lands, the black Mississippi bottoms. *Potter*: One-fourth destroyed by chinch-bugs. *Polk*: Fields adjacent to wheat, mostly destroyed by chinch-bugs. *Ralls*: Suffering from drought. *Newton*: Unusually clean; injured in places by chinch-bugs. *Dallas*: Chinch-bugs sweeping whole fields. *Cole*: Late but promising. *Laclede*: Backward; infested with chinch-bugs. *Pike*: Looking fine. *Crawford*: Very backward and poor; ruined by chinch-bugs. *Clay*: Drought and chinch-bugs. *Howard*: Just shooting, and already injured by drought. *Jasper*: Corn-fields adjoining wheat and oats are eaten by chinch-bugs; others are doing well.

KANSAS.—*Leavenworth*: Early planted is doing well where closely tended; late plantings have either failed to come up or are feebly struggling against heat and drought. *Woodson*: Fearfully ravaged by chinch-bugs near wheat-fields. *Douglass*: Chinch-bugs have taken 10 per cent. of the crop. *Wyandotte*: Never looked so well, but needs rain. *Allen*: Damaged by chinch-bugs. *Anderson*: Injured by chinch-bugs. *Bourbon*: Chinch-bugs sweeping crops on thin, light, high prairie soil. *Chase*: Badly damaged by chinch-bugs; not over a half crop. *Cherokee*: Injured by chinch-bugs in fields adjoining wheat-fields. *Ellsworth*: Must have rain soon. *Doni-*

phan: Condition excellent, but in some places poor seed has made a thin stand. *Franklin*: Every day hundreds of acres are destroyed by chinchies; a field within 20 rods of a wheat-field stands no chance; most of the corn-fields, however, are too far from the wheat to be seriously injured. *Jackson*: Chinchies at work. *Lyon*: Chinchies in corn; no rain since May 19. *Linn*: Damaged by chinchies. *Montgomery*: Will suffer severely from chinchies. *Morris*: Threatened by chinchies. *Sumner*: Threatened by chinchies. *Butler*: Chinchies after the corn. *Greenwood*: Threatened by chinchies. *Osage*: Suffering from chinchies. *Wabauensee*: With ten days more of drought the crop will be a failure. *Republic*: More than half sod-corn; a very uncertain crop. *Wilson*: Cut down by chinchies. *Atchison*: Greatly damaged by chinchies. *Neosho*: Stalks black with chinchies; much will be destroyed. *Rice*: Suffering from drought.

NEBRASKA.—*Lincoln*: Backward, but looking well. *Antelope*: Magnificent. *Adams*: Remarkably good. *Burt*: Retarded by rain and hail. *Cass*: Looks fair, but needs rain.

CALIFORNIA.—*Sacramento*: Affected injuriously by the unusually cold and backward season.

OREGON.—*Clackamas*: Injured by excessive rains; difficult to keep down weeds.

UTAH.—*San Pete*: Prospect good.

WHEAT.

The average condition of winter-wheat for the whole country is 104. The most favorable conditions of growth were found in several of the States in which other crops suffered most severely. Arkansas the maximum, 144; Tennessee, 119; West Virginia, 118; Kentucky, 117. In these States a severe and destructive drought, commencing shortly before wheat-harvest, gave to this grain a fine opportunity for ripening thoroughly, but told fearfully upon all spring and summer crops. In the Middle States the crop was generally above average, and in the States north of the Ohio nearly or quite average. Ohio, where drought has most prevailed, shows the highest average, 105. West of the Mississippi the crop was generally very good, and above average, except where late sowings were caught by chinch-bugs, which, with other causes, reduced the average of Kansas to 90. This plague was also felt in a few localities in Virginia and North Carolina, but the crop in the southern wheat States generally showed a considerable margin above average, though Texas reached only 84. In New England the small acreage of winter-wheat was somewhat injured by winter-killing. The Fultz wheat, from seed furnished by the Department, is favorably reported in Chester, Pennsylvania, but rusted badly and yielded lightly in Talbot and Calvert, Maryland. In Buckingham, Virginia, it excelled all other varieties; in Augusta it ripened several days before any other; in Madison it retained its prestige, as also in Bath; but in Spottsylvania it yielded only a half crop, and rusted badly in Dinwiddie. In Stanly, North Carolina, binders complain of the weight of the sheaves. In Fannin, Georgia, it was very fine. In Knox, Tennessee it was hardy, vigorous, and productive, excelling all other varieties. Tappahannock wheat is also reported as very successful in several portions of the county, its occasional failures being generally traceable to special abnormal conditions.

Spring-wheat shows a general average of 96. In New England it was on the whole considerably above average, though backward in several counties. In the few counties growing this crop in the Middle States it is below average. In Ohio, Nebraska, and on the Pacific coast the crop was above average. In the Northwestern States it especially suffered from the ravages of chinch-bugs and other insects. In several counties of Indiana this insect was demonstrating seriously; in Morgan several fields were destroyed and were plowed up to be put in other crops. Illinois reports numerous casualties of similar character, and in those districts of Wisconsin where droughts prevailed the same misfortune is noted. In several localities in Iowa timely rains destroyed the young

insects and saved the crops from their ravages, but not till after considerable damage had been done. The grasshoppers were also injurious here. In Missouri the chinch nuisance was quite serious. In Caldwell County the injury to the crop was estimated variously from 35 to 50 per cent. It is noticed in Benton that, while the crop was badly injured on prairie soils, on timber-land it reached a full average. Pettis reports the insects as reducing the crop from 25 to 30 per cent. In other counties, however, the pest is hardly noticeable, and the crops are uncommonly promising. The chinch also infested the spring-wheat of Kansas; in Anderson they nearly ruined the crop; in Franklin and Wilson, farmers propose to sow no more wheat till secured against this risk. In some counties, as in Montgomery, early sowings were but lightly affected, especially of drilled wheat, but broad-cast crops were badly affected. In Nebraska, where the pest did not appear, the crop was above average. In one or two counties an aversion to improved machinery for harvesting is noted; farmers preferred hiring extra labor to purchasing reapers and mowers. In some localities of California the crop was affected by hot, dry weather and north winds. In some counties of Oregon heavy rains produced a heavy growth, which it was feared might prove excessive. In Utah the crop was injured by cut-worms.

MAINE.—*Cumberland*: Spring-grain looks well.

NEW HAMPSHIRE.—*Rockingham*: Spring-grain average.

VERMONT.—*Rutland*: Late. *Lamoille*: Late. *Franklin*: Backward. *Windsor*: Backward. *Grand Isle*: Considerably winter-killed; spring-wheat late; season backward.

CONNECTICUT.—*Hartford*: All cereals ten days late, but of unusually vigorous growth.

NEW YORK.—*Steuben*: Need rain. *Westchester*: Grain-crops look well. *Washington*: Growing. *Livingston*: Growing finely. *Wyoming*: Improved during the last few weeks. *Jefferson*: Weather favorable for grain. *Wayne*: What escaped winter-killing is promising.

NEW JERSEY.—*Burlington*: Wheat harvests splendid. *Warren*: Fine; no rust or bugs. *Sussex*: Much better than usual.

PENNSYLVANIA.—*Northampton*: Straw longer and the crop better than last year; harvest later than usual. *Snyder*: Very fine, and of good quality. *Clearfield*: Never better. *Bucks*: Ripening rapidly, and very promising. *Washington*: Many fields rusted; grain shriveling in some cases. *Cameron*: Promises an early harvest and a good yield. *Chester*: Ripening rapidly; Fultz already cut, showing a good yield. *Lycoming*: Thin on the ground, and short-strawed; heads light. *Butler*: Winter-wheat the only crop that will reach an average. *Lehigh*: A fine prospect injured by drought; grains light. *Union*: Benefited by late rains. *Dauphin*: Damaged by a worm which eats out the inside of the grain, leaving the hull. *Fayette*: Finest crop in twenty years; uniformly good, well filled, evenly ripened, bright and in prime condition. *Indiana*: Filling finely. *Lancaster*: Looks remarkably well. *Lancaster*: Tappahannock, from Department, very fine; Jennings winter shows larger heads than any other variety; wheat looks fine generally. *Crawford*: Most promising crop for years.

MARYLAND.—*Caroline*: Harvested in good order; the heads are not so plump as last year, but the yield will be greater, for the stand was good and uniform on both high and low lands. In some cases the grain is shriveled by innumerable small green lice, (*Aphis avenae*), which sucked the milk while the grain was in the milky state. These pests appeared too late to do great mischief. *Charles*: Yield somewhat disappointing. *Baltimore*: Fine yield, though somewhat injured by the Hessian fly. *Dorchester*: Winter-wheat extra good, and harvested in good order. *Washington*: Remarkably well filled. *Talbot*: Fultz nearly a total failure; grain small and light; straw rusty, falling down in many fields before ripening. *Wicomico*: Somewhat shriveled, but yielding well. *Calvert*: Much injured by mildew and rot. *Saint Mary's*: Fultz a failure; red wheat better, but a third short of average. *Queen Anne*: Extreme heat ripened our red wheat all at once; straw heavy, but it is feared that the grain is shriveled; Fultz very popular; ripens three or four days earlier than red wheat; it will probably stand ten days after ripening.

VIRGINIA.—*Northumberland*: Badly rusted and smutted; fell down green, instead of ripening, in many cases; many lose their whole crops. *Tazewell*: Promising till within the last few days; considerable damage from an insect, probably the wheat midge, (*Diplosis tritici*), sucking the milk of the grain. *Warwick*: Failure through rust. *Pulaski*: Somewhat injured by drought. *Buckingham*: Improved surprisingly in the early part of June; Fultz, from the Department, excels all others; Tonzelle also grows finely, but ripens rather too late for the climate. It and the Weeks wheat suffered severely from chinch-bugs. *Spottsylvania*: Yield curtailed by rains during the blooming season; early-sown injured by hot, wet weather; later-sown escaped. *Tappahannock* and *Fultz* only half crops; grain good. *Dimiddie*:

All varieties injured except Lancaster red, which yielded very finely; Fultz rusted badly; Touzelle winter-killed and rusted; Tappahannock did well. *Fauquier*: Best crop for thirty years. *Nelson*: Chinch-bugs have spoiled the finest prospect for ten years; loss from 30 to 40 per cent. *Orange*: Ripened prematurely by hot weather, impairing both yield and quality. *Augusta*: Fultz, from the Department, ripened several days earlier than any other; Tappahannock next; Touzelle will not ripen for a week yet. *Charles City*: Some crops rusted. *James City*: Rusted three days before harvest. *Page*: Most promising for twenty-five years; quality good; labor scarce for harvesting. *Pohatan*: Good. *Rappahannock*: More favorable weather of late. *Mecklenburgh*: Shortened by rust. *Prince George*: Largely injured by rust on leaves; but for the large amount of Lancaster wheat sown there would not be half a crop. *Prince William*: Red-rust, occasioned by rainy and foggy weather, has caused a great shrinkage of grain. *Prince Edward*: Crop short and inferior. *Clarke*: Heads light. *Albemarle*: Chinchés. *Campbell*: Cor. *Culpeper*: Not well filled. *Highland*: Never better shriveled. *Lunenburg*: Rusted and filled imperfectly. *Smyth*: Best crop for many years; owing to extreme heat in June. *Gloucester*: Grain fill well. *Halifax*: Injured by chinchés and rust. from the Department, very fine; also the Tappahannock.

NORTH CAROLINA.—*Ashe*: Fultz harvested very extra crop a month ago; reduced 10 per cent. by rust year both in quantity and quality. *Rowan*: Head sh. Grain generally heavy; rusted in spots; Fultz steady weight in gathering; Tappahannock still maintains its reputation; we thank the Department for its introduction. *Caswell*: A promising crop, reduced to a third below average by rust and chinch-bug. *Forsyth*: Best crop for six years. *Gaston*: Rusted in some fields. *Greene*: Best crop in five or six years. *Warren*: Injured by rust. *Moore*: Injured by rust, especially late wheat. *Davidson*: Yield large and quality good. *Alamance*: Injured by late and wet spring; some of it blighted; some failed to mature; much of it very light. *Madison*: Fifteen days earlier and a fourth better than last year. *Macon*: Excellent, though somewhat rusted in places. *Burke*: Best crop for years.

SOUTH CAROLINA.—*Lexington*: Injured by rust or mold. *Fairfield*: Very good in good land. *Laurens*: Turns out well; best yield for twenty years; good flour; culture will increase next year.

GEORGIA.—*Harris*: Disappointed expectation. *Dawson*: Prospect declining. *Gordon*: Damaged by rust; quantity average, but quality depreciated. *Fannin*: Fultz very fine. *Guinnett*: Rust cut down the crop a little below average. *Marion*: Better than for many years; Tappahannock, from the Department, very fine. *White*: All cereals about average. *Stewart*: Unusually good.

FLORIDA.—*Gadsden*: Tappahannock, from the Department, has been very satisfactory. We would be glad to find some party prepared to furnish seed for a large cultivation.

ALABAMA.—*De Kalb*: Yield above average, but quality depreciated by rust. *Calhoun*: Grain fine and well filled.

MISSISSIPPI.—*Kemper*: Rusted somewhat.

TEXAS.—*Kerr*: Much wheat frost-killed; winter-wheat averages 6 bushels per acre; a fourth of a crop; spring-wheat 8 bushels, or a third of a crop. Tappahannock, from the Department, averaged 16 bushels of beautiful grain. *Bosque*: Depreciated in quantity and quality by rust. *Red River*: Badly damaged by drought following excessive rains. *Comal*: Will average 10 bushels per acre. *Collin*: Does not thrash out as well as was expected. *Kendall*: Winter-wheat badly rusted. *Burnet*: Frosted in some cases and rusted in others. *Bandera*: Winter-wheat averaged 9 bushels per acre; spring wheat 18½ bushels. *Ellis*: Yield small, but grain good; average about 7 bushels per acre. *Hunt*: Black rust has done some injury. *Lamar*: Does not fulfill the promise of early spring; too wet. *Wood*: Rusted. *Cooke*: Did not fill well; average yield about 10 bushels per acre. *Kaufman*: Light, through rust; will average 10 bushels per acre.

ARKANSAS.—*Craighead*: Unusual acreage sown. *Independence*: Crop never better; some of it already marketed. *Washington*: Full average, or 10 bushels per acre. *Fulton*: Universally good, and harvested in fine condition. *Marion*: Better than for years. *Arkansas*: Good. *Boone*: Fine and abundant.

TENNESSEE.—*Loudon*: Heavy straw and very light heads. *Lincoln*: Full average and of good quality. *Grundy*: Splendid. *Carter*: Many fine forward fields damaged by snow and frost during the last days of April. *Hickman*: Thrashes out 50 per cent. more than last year. *Blount*: Damaged by drought and rust. *Greene*: Failed to meet expectations. *Grainger*: Very fine. *Hawkins*: Largest acreage and yield ever known. *Knox*: Fultz the most valuable variety yet received; it is hardy, vigorous, and productive. *Monroe*: Slightly rusted. *Polk*: Somewhat rusted. *Roane*: Better than for several years. *Bledsoe*: Unusually good, free from smut, cheat, or cockle; a little rust on the blade. *Laurence*: Best crop for ten years. *Cannon*: Quality extra. *Fredley*: Upland wheat finer than any since 1857; rust quite fatal along the water-courses. *Montgomery*: Fine. *Hancock*: Best crop for many years. *Giles*: Extra good.

WEST VIRGINIA.—*Putnam*: Above average on our best lands; below average on poor soils, owing to severe drought in May. *Harrison*: Finest crop for eighteen or twenty years. *Brooke*: Better than for many years. *Monroe*: Heavy yield and excellent quality. *Nicholas*: Good. *Cabell*: Better than for many years. *Hardy*: Superior in quality and quantity. *Barbour*: Good. *Grant*: Considerably reduced by drought. *Jefferson*: Injured in some places by chinch-bugs and rust; filled finely, but straw not heavy. *Mercer*: Generally good, though injured in some places by the midge and grub-worm. *Monongalia*: Largest and best crop in twenty years; equal to the last two crops.

KENTUCKY.—*Rowan*: Wheat the only successful crop. *Shelby*: Above average in spite of drought. *Franklin*: As good as any previous crop. *Adair*: Better than usual. *Montgomery*: Never better. *Laurel*: Good. *Bracken*: Some smut and midge, but yield is good and quality better than for many years. *Anderson*: Good; somewhat injured by the midge. *Christian*: Best for years, both in quantity and quality. *Lincoln*: Good. *Lewis*: Largest harvest ever known. *Warren*: Best crop ever raised in the county. *Graves*: Reduced 10 per cent. by wet spring and dry June. *Logan*: Large yield of fine, plump grain. *Mason*: Excellent in quality, but the yield short of expectation. *Mercer*: Approximates the great crop of 1855. *Touzelle*, from the Department, heads well, but the straw is rather delicate; Tappahannock much better. *Scott*: Unusually good; the only crop approaching average. *Owsley*: The only successful crop. *Nelson*: Excellent, having matured before the drought. *Meigs*: Good. *Gallatin*: Above average.

OHIO.—*Trumbull*: Abundant. *Coshocton*: Largest and best crop for years; *Fultz* superior to other varieties. *Delaware*: May and June very favorable; crop recovered from winter-freezing, and is fine in yield, stand, and plumpness of berry. *Licking*: Harvest early and abundant; better crop than for many years. *Montgomery*: Good. *Erie*: Quality fine. *Hancock*: Unusually fine; some fields will average 30 bushels per acre. *Marion*: Spring-wheat about abandoned. *Scioto*: Better than for years. *Athens*: Average in spite of drought.

MICHIGAN.—*Saginaw*: Injured by spring frosts. *Kalamazoo*: Ripening finely. *Hillsdale*: Tappahannock 10 inches above the *Touzelle*, both sown at the same time; the *Deal* and *Treadwell* our most usual varieties. *Tuscola*: What survived winter-killing is doing very well. *Cathoun*: The dry, windy, hot weather may injure the crop. *Montcalm*: Never better. *Cass*: Just ripening; if well secured, the yield will be larger than ever.

INDIANA.—*Grant*: Very seriously damaged by chinch-bugs. *Elkhart*: badly winter-killed on clay soils; filled unusually well on sandy soils. *Madison*: Moderate. *Howard*: Nearly half-destroyed in March, but the remaining half is 10 per cent. better than last year. *Decatur*: Injured by storms in harvest. *Kosciusko*: The crop, on other than clay soils, never filled better; a week or ten days early; fine season. *Perry*: Injured by chinch-bugs. *Putnam*: Chinch-bugs cut the crop down below average. *Ripley*: Yield good and grain fine; harvest hastened by drought. *Shelby*: Chinch-bugs very injurious to late-sown winter-wheat. *Washington*: Best crops since 1869; chinch-bugs injured it a little. *Gibson*: Berry good; will average 20 bushels per acre. *Harrison*: Winter-wheat above average. *Brown*: Early-sown good; late sown damaged by chinch-bug. *Cass*: Some fields thin, but with large heads. *Crawford*: Somewhat injured by chinch-bugs, but will probably be average. *De Kalb*: Winter-wheat a failure on clay and flat grounds; very good on sandy soils. *Floyd*: Best crop in twenty years. *Hamilton*: Damaged by rain and wind; much will be lost in cutting. *Morgan*: Some fields taken by chinch-bug; some had been plowed for corn; yield reduced. *Noble*: One-fifth of the wheat on clay ground was badly winter-killed; the rest as good as ever. *Pike*: Never better; some farmers average 25 bushels per acre. *Steuben*: Greatly improved since early spring. *Switzerland*: Surpasses any previous crop. *Wayne*: The grains unusually good. *Franklin*: Unusually good. *Tippicanoe*: Unusually fine fields on drained lands. *Warren*: Somewhat damaged by chinch-bugs in places. *Whiteley*: Badly frozen out, but what survived did well. *Paoli*: Injured by chinch-bugs in some cases slightly, and in others very severely.

ILLINOIS.—*Pike*: Looks well; straw heavy; some rust; and a great many chinch-bugs. *Logan*: Spring-wheat injured some by rust and chinch-bugs. *McLean*: Grain of all sorts looks well; less injured by insects than was supposed; weather warm and showery. *Cumberland*: Somewhat injured by chinch-bugs. *Jersey*: A tornado, June 28, scattered the shocks and sheaves; the crop will be well saved. *Macon*: Winter-wheat heads well filled; some pieces infested with bugs. *Madison*: Generally good; some fields infested with chinch-bugs. *Saint Clair*: Harvested in fine order. *Carroll*: Too dry to fill well. *Cass*: Spring-wheat eaten by chinch-bugs. *Clinton*: Much injured by chinch-bugs. *Winnebago*: Prospects dampened within a few days. *Montgomery*: Mostly good and fine, but somewhat injured by chinch-bugs. *Moultrie*: Not over a fifth will be cut; the rest ruined by chinch-bugs. *Sangamon*: Dry, hot weather favorable to winter-wheat, but not to spring crops. *Vermilion*: Injured by chinch-bugs to some extent, but the yield will be full average. *Washington*: Largest crop ever ches in the south part of the county; winter-wheat generally good, being fine and raised here; wheat superseding other crops. *Piatt*: Spring-wheat destroyed by chinch-plump. *Perry*: Good, although chinch-bugs were very troublesome. *Schuyler*: Winter-wheat harvested in fine order; quality extra; spring-wheat mostly destroyed by chinch-bugs. *White*: But for chinch-bugs the wheat-crop would have exceeded any prior one. *Mercer*: Rapidly drying up.

WISCONSIN.—*Crawford*: Winter-wheat suffered from drought. *Pierce*: Many fields thin and weedy. *Clark*: Increased attention to winter-wheat. *Dodge*: Thin and short. *Douglas*: Somewhat drowned out. *Green Lake*: Promising. *Jefferson*: Damaged somewhat by chinchies. *Calumet*: Drilled wheat far ahead of broadcast. *Dane*: Fultz wheat a fine yield, though winter-wheat is not much grown; spring-wheat threatened by chinchies. *Fond du Lac*: Berry shrinking through excessive heat. *Green*: Chinch-bugs flourishing in the drought; some farmers have plowed up their spring-wheat.

MINNESOTA.—*Steele*: Some pieces, through drought in May, did not stool out thick, but, on the whole, it now looks very promising. *Chippewa*: Spring-wheat, our staple crop, promises finely; no grasshoppers. *Goodhue*: Spring-wheat affected by drought, especially on old land. *Houston*: Growing finely, but it is feared the wet weather will produce an excessive growth of straw. *McLeod*: Wet weather enhances the growth of straw. *Meeker*: Improved by the wet weather. *Mower*: Exceeding all expectation since last month. *Sherburne*: Best crop for many years. *Wabasha*: Good. *Jackson*: But few pieces left by the grasshopper. *Douglas*: Prospect for small grain never better. *Wille*: Looks fine where not devoured by grasshopper. *Wright*: Wheat fully one-tenth. *Isanti*: Late rains gave small grain a good start.

IOWA.—*Cass*: Never a better prospect for wheat crops shortened by drought. *Clinton*: Wheat just above rust. *Clarke*: Rains destroying the young crop. *Delaware*: Small grain. *Lee*: Winter-wheat an unusually large crop; spring-wheat will not pay for cutting. *Mitchell*: Growing rapidly. *Greene*: Did not stool at the proper time on account of drought; hence crop shortened. *Hancock*: On new breakings spring-wheat is full 15 per cent. better than last year; on old lands as much poorer; grasshoppers, in some places, have swept the fields. *Harrison*: Much spring-wheat destroyed by grasshoppers and plowed up for corn; three-fourths of the crop destroyed. *Henry*: Looks well, though it suffered from the hot sun while in blossom. *Howard*: Early sowings on new soil are excellent; late sowings injured by drought. *Hardin*: Thinner than usual, but clean and free from rust. *Jefferson*: Seriously injured by drought and chinchies. *Taylor*: Spring-wheat rather short-strawed; a little damaged by chinchies. *Humboldt*: Injured by grasshoppers. *Webster*: A third of the wheat in the northern part of the county destroyed by grasshoppers.

MISSOURI.—*Lawrence*: Chinchies not very injurious, but Hessian flies threaten the whole crop. *Texas*: Fifty per cent. better than last year. *Caldwell*: Threatened by chinchies; crop damaged already 35 to 50 per cent. *Cass*: But few fields of good wheat. Chinchies have been very destructive. *Nodaway*: Fall-wheat leaf-rusted; spring-wheat injured by drought. *Greene*: Fine in quality. *Moniteau*: Finest crop ever raised here. *Barton*: Best crop for many years. *Daviess*: Excellent; chinchies behind time. *Taney*: Never better. *Bates*: Chinchies nearly destroyed the crop. *Benton*: Wheat on prairie soil badly injured by chinchies. On timber-land the crop is average. *Carroll*: Spring-wheat eaten by chinchies; winter-wheat did not entirely escape. *Cape Girardeau*: Suffering from drought. *Clinton*: Chinchies. *De Kalb*: Winter-wheat somewhat injured by chinchies. *Harrison*: Chinchies in spring-wheat. *Iron*: Best crop for years. *Johnson*: Chinchies destructive in some places. *Sage*: Harvest ten days early; crop better than for many years. *Perry*: Excellent in quantity and quality. *Pettis*: Damaged by chinchies 25 to 30 per cent. *Polk*: Fultz, from the Department, a very superior crop. *Ralls*: Chinchies have done great damage in a few fields. *Randolph*: Chinchies injured a few late-sown fields. *Reynolds*: Better than for many years. *Ripley*: Finer than ever. *Stoddard*: Largest and best crop ever raised. *Adair*: Damaged by chinchies. *Cole*: Prices sinking, crop so large and fine. *Laclede*: Best crop ever known here. *Clay*: Chinchies too late. *Howard*: Good quality; crop safe. *Jasper*: Largest crop ever harvested.

KANSAS.—*Leavenworth*: Threatened by chinchies. *Douglas*: Spring-wheat mostly destroyed by chinchies. *Wyandot*: Never better; secured in excellent condition. *Allen*: Damaged by chinchies. *Anderson*: Nearly ruined by chinchies. *Barton*: Winter grain good, and well secured. *Bourbon*: Harvested in good condition. *Chase*: Spring-wheat badly damaged by chinchies. *Cherokee*: Ripened too soon for chinch-bugs; a very superior yield. *Franklin*: Wheat-fields full of chinchies. Farmers say they will sow no more wheat. *Jackson*: Chinchies injured fall-wheat and almost ruined spring-wheat. *Jefferson*: Badly injured by chinchies. *Lyon*: Chinchies in spring-wheat. *Lincoln*: Damaged by chinchies. *Montgomery*: Early sowing got the crop mostly out of the way of chinchies. Early varieties, drilled, suffered but little; late broadcast crops suffered more. *Morris*: Spring-wheat threatened by chinchies. *Smith*: Spring-wheat from the Department will yield 40 bushels per acre. *Sumner*: Spring-wheat injured by chinchies. *Washington*: Spring-wheat the best yield I have seen in this State for twenty years. I am satisfied that our prairie sub-soil, so rich in gypsum and iron, cannot be exhausted by cereal crops. *Butler*: Largest and best yield of winter-wheat—30 bushels per acre. Some fields reach 40 bushels. Spring-wheat almost totally destroyed by chinchies. *Greenwood*: Winter-wheat affected, and spring-wheat almost destroyed by chinchies. *Marion*: Winter-wheat could not be better. Spring-wheat injured by drought in May and by chinchies. Many fields will not be cut. *Labette*:

An unparalleled success, but in some cases cut too green in order to escape chinchies; some of it damaged in the sheaf. Tappahannock gives poor satisfaction. Fultz does well. *Osage*: Chinchies destroyed the spring-wheat and most of the fall-wheat. *Wabaunsee*: Spring-wheat largely destroyed by chinchies. *Republic*: In fine condition where early sown. *Wilson*: Castor-beans and flax taking the place of small grain till the chinchies get out of the way. *Atchison*: Chinchies very injurious. *Neosho*: A magnificent crop but for the chinchies; in the north part of the county one-fourth of the grain was left standing, not being worth cutting.

NEBRASKA.—*Nicholls*: Late-sown wheat affected by the drought. *Cass*: Our wheat was blighted considerably. *Antelope*: Very promising. *Merrick*: Some wheat "fired" by hot south winds following a wet spring. *Boone*: Lack of harvesting-machinery; many prefer hiring labor to purchasing implements. *Hall*: Grain-crops improved with late warm south winds. *Adams*: Remarkably good. *Nemaha*: Spring-wheat somewhat "scabbed."

CALIFORNIA.—*San Diego*: Better crops than for five years. *Napa*: Sowing delayed, and acreage restricted by heavy winter-rains; yield subsequently injured by dry north winds. *Del Norte*: Grain looks well, but is late. *Santa Clara*: Affected seriously by hot, dry weather and north winds. *Santa Cruz*: Grain-crops fine, especially early sown; late sown greatly improved by recent rains, and will be a fair average crop. *Stanislaus*: Overestimated as usual. *Merced*: Lately injured by northwest winds; all grain except summer-fallow is more or less shrunk; crop, however, in cents, will be a full average. *Alameda*: Considerably rusted, especially near San Francisco Bay; ships loading new wheat at Oakland wharves. *Mendocino*: Late wheat looks remarkably well. *Placer*: Poorer than in any other county of the State owing to excessive winter rains.

OREGON.—*Multnomah*: Grain-crops heavy on account of unusual rain-fall; some fear that the crops may overgrow and fall. *Benton*: Spring unusually cool, with frequent rains; harvest will be late, but the yield abundant. *Columbia*: Looks exceedingly well.

UTAH.—*Weber*: All our cereals promise abundant crops. *San Pete*: One-fourth destroyed by cut-worms. *Utah*: Injured by cut-worms.

COTTON.

The cotton-planters report to the Department of Agriculture, in accordance with the conditional promise of the June report, an improvement in the condition of the plant in every State. The percentages of average condition are higher than in June, by the following figures: 3 in Louisiana, 4 in Arkansas, 6 in Florida, 7 in South Carolina, 9 in Mississippi, 10 in Alabama, 11 in Georgia, 12 in Tennessee and Texas, 13 in North Carolina. Texas and North Carolina return condition above average. The following are the State averages: North Carolina, 102; South Carolina, 88; Georgia, 91; Florida, 96; Alabama, 92; Mississippi, 87; Louisiana, 73; Texas, 102; Arkansas, 94; Tennessee, 97. As compared with July of last year, condition is higher, except in Florida, Louisiana, and Arkansas, though the difference is slight in Tennessee and Georgia, and not very wide in Mississippi and Alabama.

In North Carolina temperature has been high, rains seasonable, and growth rapid; the plant is still small and ten days late in certain counties. Fields have generally had good preparation and clean culture. Edgecomb, which produces one-eighth of the cotton of the State, returns condition 110.

Improvement has been rapid in South Carolina, and is still progressing, though growth is not advanced to an average. Lice infest some fields. Darlington, yielding one-seventh of the fiber of the State, returns condition at 90.

Seventy-three counties in Georgia, representing two-thirds of the crop, report a backward season, too much rain, better and cleaner tillage than last year; less of fertilizers used. Rumors of the caterpillar come up from Southwestern Georgia.

Improvement is manifest in Florida, with too abundant rains in some counties, and a tendency to the shedding of forms.

While rains have been frequent in Alabama, fields have generally been kept clean. Of seven counties, which yield a third of the crop of the State, condition is placed at 90 in Bullock, Barbour, Montgomery,

Marengo, and Russell; 80 in Hale, and 100 in Dallas. None are lower than 75 or higher than 100.

The crop is late in Mississippi, but growing rapidly. It is grassy in places, yet much cleaner than last year. Condition ranges from 50 in Tunica, where it was destroyed by overflow, to 110 in De Soto and several other counties.

The Louisiana planting continued after the overflow until June 15, and the crop is therefore later than elsewhere, and has suffered in places from cut-worms, drought, and excessive rains. The caterpillar appeared in Rapides.

Rarely has Texas had better promise of cotton growth is not well advanced; in a few places the appearance late in June. The stand is good in all the States.

Drought has been injurious in Arkansas. There has been no rain in eight weeks. In one township in Independence 1,000 acres were left uncultivated on account of drought. Rains have been more general of late in portions of the State; yet fully half the counties report 100 and above.

A majority of the counties of Tennessee return average condition; a few range from 65 to 100, and Shelby County, which yields one-sixth of the State aggregate, is placed at 110.

The following extracts from remarks of correspondents are made:

VIRGINIA.—*Dinwiddie*: Looks well, though planted late; season favorable and crop clean.

NORTH CAROLINA.—*Cleveland*: Good season; land better prepared, and more commercial fertilizers than usual. *Edgecombe*: Good stand. *Rovan*: Promising, though small for the season. *Wake*: Greatly improved by the hot dry June weather; crop perfectly free from grass; fine rains beginning to fall. *Gaston*: Last six weeks favorable to working the crop; crop looks flourishing, but it is ten days late. *Lincoln*: Acreage increased at the expense of corn and tobacco. *Greene*: Stand good, and generally clear of grass and weeds; better cultivated than for six years. *Chowan*: Plants small, but look well. *Warren*: Injured by late spring. *Pitt*: Very little grass in the crop. *Moore*: Doing well. *Davidson*: Greatly benefited by recent rains. *Wayne*: About 20,000 acres in the county this year planted in cotton. *Wilson*: Acreage decreased, but the improved condition will make up the deficiency.

SOUTH CAROLINA.—*Union*: From two weeks to a month later than usual. *Clarendon*: Small and two or three weeks late, but growing very well, and of healthy appearance. *Darlington*: Early spring very unfavorable. *Marion*: Generally in good condition, and growing rapidly; improved 10 per cent. in June. *Marlborough*: Late and infested with lice; cultivation improved; with a favorable season a decreased acreage will make an average yield. *Williamsburgh*: Poor stand. *Edgefield*: Almost average; improved by late showers. *Richland*: Improved by recent rains, but stand generally bad. *Lexington*: Backward. *Newberry*: Yield will be short without a seasonable fall. *Orangeburgh*: Clean and growing fast. *Fairfield*: Doing well. *Spartanburgh*: Doing pretty well; bloom almost as early as usual.

GEORGIA.—*Columbia*: Season fine; crop healthy but grassy and backward. *Harris*: Considerable replanting, putting the crop back three weeks; injured by frost and rains; if everything is favorable we will have two-thirds of a crop; labor easier. *Worth*: Cut off by frost, rain, and cut-worms; stand poor. *Muscogee*: Much of the cotton acreage plowed up for corn; improving though rains have been excessive; alarming rumors of caterpillars in southwest Georgia. *Clinch*: Very promising. *Randolph*: Looks well, though small. *Schley*: Two weeks late; can't make more than 80 per cent. of an average. *Wilkinson*: Small but promising. *Guinnett*: 6 weeks late; much replanted; first bloom June 27, generally not before July 4. *Terrell*: Running considerably to weed; bad stand; injured by rains. *Taliaferro*: Acreage reduced 25 per cent.; only half the guano of last year used; stand irregular; better tillage than last year, but the yield will fall short 25 or 33 per cent. *Wayne*: Rain becoming excessive. *Hancock*: Small, but good and growing tolerably fast. *Dougherty*: June favorable for growth but not for cultivation; grass growing fast. *Brooks*: Greatly improved by rains of June. *Baker*: Only tolerable; too much rain. *Carroll*: The crop has taken a fresh start and will be fair with a late fall. *Cobb*: Weed growing rapidly from late rains. *Douglass*: Crop clean. *Dooley*: Poorer than ever known. *Fulton*: Vigorous; first bloom June 20; last year June 15. Freedmen doing well. *Lincoln*: Three to four weeks late; 50 per cent. less of fertilizers used; season promising. *Liberty*: Culture

diminishing; highland rice taking its place; cotton stolen from the fields by night; stand late. *Milton*: Have been growing fast for four weeks; still a little late but promising. *Putnam*: A month backward. *Richmond*: At least twenty days behind last year; damaged by storms. *Twiggs*: Three weeks late; would greatly improve with favorable weather. *Heard*: Some indications of boll-worms. *White*: A little better. *Early*: One worm reliably identified. *Oglethorpe*: Bloomed three weeks later than last year and about half the size of this time last season. *Stuart*: Badly in the grass; rained twenty-seven days in June. *De Kalb*: Healthy but late. *Morgan*: Not rain enough to bring up late plantings; crops clean.

FLORIDA.—*Jefferson*: Satisfactory. *Gadsden*: Some complaint of defective stands, and of a tendency to shed forms, but the condition has greatly improved and is now quite satisfactory. Constant rain for two weeks. *Jackson*: Cotton doing well. *Leon*: Crop greatly improved in June; some fields grassy. *Columbia*: Stand inferior, but looks well.

ALABAMA.—*Greene*: Heavy spring rains caused much of the cotton to be replanted; it looks healthy, and is doing well, though backward; stand defective. *De Kalb*: Late, but weeding finely. *St. Clair*: Has been backward, but has started to growing finely. *Chambers*: Three weeks late. *Montgomery*: Backward, but looks well. *Macon*: Grassy, through excessive rain. *Crenshaw*: Some complaint of poor stands, but generally flourishing. *Conceh*: Too much rain; looks badly. *Clarke*: Bad stands, through defective seed and a wet, cold April, but greatly improved with recent rains; plants thrifty and growing finely. *Franklin*: Looks unusually well; though planted fifteen days later than usual the first bloom was seen June 25, a week earlier than usual. *Limestone*: Early plantings full average; later, not so good. *Lauderdale*: Improved wonderfully during the month of June; has been well cleaned, and is growing finely with recent showers. *Hale*: Behind time twenty days but growing finely. *Pike*: Stand poor; fruit formation backward; acreage reduced 20 per cent.; labor improving. *Dallas*: Promising. *Perry*: Weeding rapidly, but fruit does not appear; daily rains injurious. *Clay*: Poor stand and growth. *Bullock*: Stand poor; plants small. *Wilcox*: Stand defective, but the plants look well. *Calhoun*: Greatly improved, but still behind in growth.

MISSISSIPPI.—*Amite*: Rain following drought; hail-storms injured the crop, but still it is of average promise. *Copiah*: Small, but clean and promising. *Harrison*: Growth somewhat retarded by unfavorable weather and insects. *Pike*: A month backward. *Newton*: Good stand; doing well. *Warren*: Grows rapidly on recently overflowed land; much replanted. *Jasper*: A month late. *Grenada*: An unusual amount in grass; prospect fair where well worked. *Wayne*: Excessive rains prevented good stands, but subsequent drought enabled the planters to work it clean. *Coahoma*: Late, but looks well. *De Soto*: Fine. *Lowndes*: Stands irregular; late rains have improved the crop in some localities. *Kemper*: Promising. *Smith*: Ten days behind, but of average promise; first bloom June 23, usually June 10 to 15. *Lauderdale*: Great improvement lately. *Lee*: Improved astonishingly within a month; weed large and full of squares. *Marion*: Cotton-flies in immense numbers have appeared in one field. *Madison*: Late eighteen days, but well worked; plants small but thrifty. *Jefferson*: Small, but growing well.

LOUISIANA.—*Morehouse*: Three weeks late, but is as large as last year, and in better condition; planting delayed by excessive rains. *East Baton Rouge*: Suffered from drought following excessive rains, yet the crop is about average. *Union*: Suffered from drought. *Rapides*: Growing finely, but two weeks late; caterpillars have been seen. *Franklin*: More late cotton than usual; looks well but cannot bring a full crop. *Cameron*: Promising. *Concordia*: Planting, after the overflow, continued till June 15; acreage decreased 30 per cent.; May drought kept the seed from germinating; stand generally good, but cannot make over half a crop. *Caddo*: Has done remarkably well; unusually clean. *Tensas*: Doing as well as late cotton can be expected to do; some of it looks badly injured by cut-worms; rain needed. *West Feliciana*: Replanted cotton late; stand irregular; many bad spots. *Washington*: Suffered some from drought. *Madison*: Improving for thirty days past. *Richland*: Early planted doing well; no good rain for nine weeks; plantings on overflowed lands suffering from drought.

TEXAS.—*Hood*: Prospect finer than ever known. *Austin*: Late but doing well; yield will be below average. *Bosque*: Good; improved by the late fine weather. *Collin*: Never more promising. *Waller*: Growing steadily and fruiting finely; cotton fly reported. *Upshur*: Crop clean, and stand excellent. *Burnet*: Looks well generally; season favorable. *Bandera*: Low, but looks well; growing fast. *Ellis*: Never in better condition. *Fayette*: A little backward, but very promising. *Fort Bend*: Prospects better than at any time since the war. *Gonzales*: Good where good stands were obtained before the drought. *Grimes*: Fine. *Harrison*: Late, but looks well; needs rain. *Hunt*: Fine looking, but late. *Lamar*: Prospect very fine. *Milam*: One-fourth rotted by recent rains; the rest promising. *Robertson*: Looks well where well cultivated. *Smith*: Has rapidly improved with the last six weeks of dry hot weather; growing finely. *San Jacinto*: Three weeks late, but well worked. *Williamson*: Poor stands, especially on new lands; only slight showers for seventy days; plants small. *Washington*: Well cleaned during the dry weather, and now profiting from the seasonable rains. *Wood*: Better condition than last year; threatened with worms. *Matagorda*: Some fine crops, but mostly indifferent; about 30 per cent. has

just come up. *Bell*: Generally clean, but needs rain. *Anderson*: Late; sustains the drought wonderfully. *Uvalde*: Suffering for rain. *Lavaca*: Prospects favorable. *Atascosa*: Hot and showery. *Marion*: Looks well. *Medina*: Early plantings killed by April frosts, replantings promise well. *Nacogdoches*: Rather promising. *Falls*: Injured by heavy spring rains, frosts, &c. *Kaufman*: Promises the best crop in twelve years.

ARKANSAS.—*Pulaski*: No rain for eight weeks; at least 20 per cent. of the cotton planted on the blackland has never come up; on the sandy ground the condition is average; blooming prematurely on account of drought; 5 per cent. of the cotton-land is not in cultivation on account of bad condition of plantations. *Union*: Eight weeks' drought; crops clean and promising. *Dallas*: Part of the crop has had no rain for eight weeks, but will compare with last year's condition. *Craighead*: No general rain since April 5. *Garland*: No rain for nine weeks; cotton dead; wet spring delayed or prevented. *Garland*: Cotton planted had to be replanted in many cases; what remained is in poor condition. *Jackson*: Extremely wet up to June 1, and no rain since; cotton in fine condition. *Crittenden*: Floods made cotton in poor condition; well as could be expected; boll-worms attacking the cotton. *Columbia*: Doing well in spite of eight weeks' drought. *Independence*: In one township 1,000 acres, intended for cotton, but ruined on account of the drought. *Hempstead*: Cotton in poor condition; drought, but cannot stand it much longer. *Sebastian*: Cotton in good condition; recent rains have been very beneficial. *Yell*: Season favorable; crop clean and in fine condition. *Marion*: Generally smaller than last year, especially on old land; wet spring caused the ground to bake; on new land and on bottoms the crop is fine. *Arkansas*: Short; wet in the early spring, and dry afterwards for seven weeks; not over a half crop. *Boone*: Backward but growing finely.

TENNESSEE.—*Madison*: Bad stand and looking poorly on account of drought. *Lincoln*: Healthy but very small; two weeks late. *Bedford*: Cotton stands the drought better than the other crops. *Giles*: Well worked. *Lauderdale*: Stand poor.

MISSOURI.—*Ripley*: Cotton late and a bad stand.

CALIFORNIA.—*Fresno*: Cotton squaring out, and some early cotton in bloom; temperature 108° Fahr. in the shade, at 2 p. m.

OATS.

The average condition for the whole country is 90, the maximum being, in Nebraska, 113; and the minimum, in Kentucky, 54. In general the condition of the crop is better in the higher latitudes, though Mississippi and Louisiana are full average or above. In New England and the Middle States the crop, though in many places backward, promised favorably, except in Pennsylvania. Here, in many counties, drought at the critical period shortened both straw and grain, reducing the State average to 83. The same cause, together with rust, depreciated the crop in the South Atlantic coast States, and in most of the Gulf States; in Arkansas to 80; Tennessee, 56; West Virginia, 62; and Kentucky, 54. North of the Ohio, Michigan and Wisconsin are above average, and the other States below. West of the Mississippi the condition ranges from 101 in Iowa, to 65 in Kansas. Here and in Missouri the chinch-bug was very troublesome in many counties. In Nebraska, and on the Pacific, the crop stands considerably above average. From Utah Territory come complaints of cut-worms.

VERMONT.—*Rutland*: Backward. *Franklin*: Backward. *Windsor*: Backward. *Lamoille*: Backward.

MASSACHUSETTS.—*Berkshire*: Look finely.

CONNECTICUT.—*New London*: Excellent.

NEW-YORK.—*Washington*: Growing finely. *Westchester*: Look very well. *Livingston*: Need rain. *Wyoming*: Very promising. *Sullivan*: Remarkably fine. *Wayne*: Large and heavy.

NEW JERSEY.—*Camden*: Very short; but with good rains may fill well. *Warren*: A little late, but making a good stand and growing well. *Mercer*: Drought injurious. *Hudson*: Sown late, but with a good season they will do well.

PENNSYLVANIA.—*Northampton*: Very poor and backward. *Bucks*: Will be ruined without rain. *Perry*: Injured by drought. *Washington*: Very short-strawed. *Westmoreland*: Very short crop. *Huntingdon*: Almost ruined by drought. *Lehigh*: Short-strawed; injured by drought. *Fayette*: Very short, owing to late spring-drougths. *Indiana*: Short

and needing rain. *Pike*: Not promising. *Tioga*: Shortened by drought. *Crawford*: Best crop for years.

DELAWARE.—*Sussex*: Retarded by drought following excessive rain.

MARYLAND.—*Caroline*: Early yellow oats from the Department are very fine, superseding all others. *Baltimore*: Crop will be short if rain does not come soon. *Washington*: Will be shortened by drought. *Harford*: Suffering from drought. *Queen Anne*: Doing well; heads full of grain.

VIRGINIA.—*Spotsylvania*: Very short; no rain for two weeks while heading. *Fauquier*: Heading low, and will be short. *Nelson*: Light crop. *Orange*: Crop short, except winter-oats sown in autumn. *Augusta*: Improved by late rains. *James City*: Winter-sowings are magnificent. February and March sowings very good; later, chaffy, and scarce fit to cut. *Elizabeth City*: Injured by drought and extreme heat. Since June 6 not enough rain has fallen to moisten the rain-gauge. *Mecklenburgh*: Promising till the rust set in about ten days ago. *Prince George*: Spring-oats seriously affected by drought. *Buckingham*: Threatened by chinch-bugs. *Albemarle*: Chinch-bugs. *Chesterfield*: Winter-seeding good; spring-seeding damaged by drought. *Campbell*: Indifferent. *Highland*: Injured by drought. *King and Queen*: Favorable. *Smyth*: Affected by drought. *Halifax*: Shortened by drought. *Buchanan*: Unfavorable season. *Bath*: Light and short.

NORTH CAROLINA.—*Ashe*: Very short through drought. *Caldwell*: Shortened by drought; very poor. *Cleveland*: Fall-sown oats a good average; spring-sowings cut short by drought. *Rowan*: Winter-oats good; spring crops almost a failure on the uplands. *Transylvania*: Almost a failure through rust. *Caswell*: Damaged by drought and rust. *Randolph*: Spring-oats scarcely worth harvesting; destroyed by rust; fall-oats (early sown) are excellent. *Haywood*: Injured by drought. *Wilson*: Poorest crop for years.

SOUTH CAROLINA.—*Clarendon*: Fall-sowings generally good; spring-sowings generally destroyed by rust. Potato-oats ten days later than the common varieties; Somerset will probably do well, if fall-sown. *Richland*: Spring-oats greatly improved by late rains.

GEORGIA.—*Columbia*: Almost a failure from rust. *Upson*: Some rust. *Pickens*: Rust. *Gordon*: Fall-sowings good; spring-sowings trifling. *Harris*: Benefited by June rains. *Troup*: Fall-oats good. *Gwinnett*: Fair; rust on bottom-lands. *Montgomery*: Average in spite of rust; better than for many years. *Forsyth*: Badly rusted. *Baldwin*: Acreage nearly or quite doubled. *Baker*: Rust-proof here, never fails; crop fine. *Cobb*: Shortened a third by cold spring. *Upson*: Suffering from dry rust. *Carroll*: Rusted.

FLORIDA.—*Jackson*: Acreage constantly increasing; rusted in some localities, but a good crop on the whole.

ALABAMA.—*De Kalb*: Damaged by rust. *Concuh*: Shortened by rust. *Clarke*: The anti-rust variety is the only one that has done anything. *Bullock*: Very fine. *Calhoun*: Damaged by rust and storms; Somerset oats from the Department rusted and fell down before ripening.

MISSISSIPPI.—*Kemper*: Fair. *Atlanta*: Red oats our only safe crop. *Grenada*: Potato-oats from the Department did well. *Wilkinson*: Damaged by rain and wind. *Newton*: Shortened by drought. *Jasper*: Spring-oats injured by the May drought. *Rankin*: Even the anti-rust oats have rusted; fall-sowing, full crop; spring-sowings, half a crop; White Schonen and Somerset from the Department destroyed by rust.

LOUISIANA.—*Caddo*: Ruined by drought.

TEXAS.—*Austin*: Rust. *Bosque*: Fine; yield from forty to eighty bushels per acre. *Red River*: Suffered from rains and drought. *Victoria*: Winter-oats more extensively sown; average yield, fifty bushels per acre. *Caldwell*: Oats from the Department rusted. *Grimes*: Shortened by drought. *Lamar*: Excessive rains have made a poor crop on flat lands. *Shelby*: Only red, rust-proof escaped rust.

ARKANSAS.—*Independence*: Suffering from drought. *Sebastian*: Shortened by drought of May and June. *Fulton*: Nearly ruined by drought. *Marion*: Almost a failure; early season wet, later very dry. *Arkansas*: Shortened by drought in places.

TENNESSEE.—*Grundy*: Rust cut the crop down one-third. *Carter*: Shortened by drought. *Hickman*: Almost ruined by drought and rust. *Bedford*: Injurious drought. *Blount*: Damaged by drought and rust. *Greene*: Shortened by drought. *Grainger*: Short. *Monroe*: Cut off by drought and storms. *Polk*: Materially injured by rust; some fields fell before ripening. *Roane*: Shortened one-half by drought. *Lawrence*: Very indifferent, owing to drought and rust. *Bradley*: Spring-oats extremely short. *Macon*: About knee-high. *Montgomery*: Too low to be cut. *Hancock*: Some rust. *Giles*: Almost a failure.

WEST VIRGINIA.—*Harrison*: Cannot make over a half crop. *Preston*: Both early and late sown, poor. *Jackson*: Shortened by drought of thirty-five days. *Brooke*: Almost a total failure through drought. *Monroe*: A failure, except on good rich soil. *Nicholas*: Half a crop; drought. *Ritchie*: Shortened by drought. *Cabell*: A total failure; drought. *Morgan*: Shortened by drought. *Barbour*: More or less injured by drought. *Grant*: Almost ruined by drought. *Mercer*: Short-strawed, but heading out well; injured by drought. *Pendleton*: Injured by drought. *Monongalia*: One-fourth short. *Fayette*: A large acreage will not be harvested.

KENTUCKY.—*Jefferson*: Shortened by drought. *Shelby*: From 10 to 18 inches high; almost a failure. *Trimble*: Damaged by drought. *Boyle*: Will be but a fractional crop.

Adair: Almost a total failure. *Hardin*: Almost an entire failure. *Laurel*: Cut off one-half by drought. *Taylor*: Nearly cut off by drought; three-fourths of the acreage will not be cut. *Anderson*: Almost a failure through drought. *Christian*: Ruined by drought. *Hopkins*: Will not pay for cutting. *Lincoln*: Almost a failure. *Warren*: Shortened by nine weeks of drought. *Carroll*: Shortened by drought of May and June. *Russell*: A complete failure. *Rockcastle*: Nearly a failure. No rain since May 1, except a light shower June 26. *Owsley*: Not over half a crop. *Owen*: An entire failure; in some places they are too low to cut. *Gallatin*: Very short. *Metcalf*: Poor.

OHIO.—*Vinton*: Will scarce pay for cutting; but little rain since May 1. *Jackson*: A failure. *Coshocton*: Seriously injured by drought. *Delaware*: Rather dry, but promise an average yield. *Licking*: Shortened by drought; no rain since May 1. *Perry*: Injured by drought. *Montgomery*: Shortened by drought. *Adams*: Chinch-bugs eating the oats. *Mahoning*: Shortened by drought. *Meigs*: Suffering from continued drought.

MICHIGAN.—*Menomonee*: Season favorable. *Cathoun*: Look well.

INDIANA.—*Orange*: Greatly damaged by chinch-bugs. *Howard*: Fine. *Decatur*: Almost a failure. *Perry*: Almost a failure. *Putnam*: Not very rank, but heading up well. *Ripley*: About half a crop. *Washington*: Short through drought. *Harrison*: Oats almost a failure. *Brown*: Short through drought; some too short to cut. *Clay*: Short, but fairly headed. *Crawford*: Threatened by chinch-bugs. *Floyd*: Average about a foot in height; some crops not worth cutting; most will be mowed as hay. *Hamilton*: Extra fine. *Marion*: Shortened by drought. *Wayne*: Shortened by drought. *Franklin*: Shortened by drought. *Whitely*: Rather dry.

ILLINOIS.—*Kankakee*: Late rains saved the oats. *Madison*: Very short. *Clinton*: Injured by chinch-bugs. *Effingham*: Shortened by drought. *Jackson*: Damaged by drought and chinch-bugs. *Montgomery*: Very short. *Richland*: Largely destroyed by chinch-bugs. *Sangamon*: Too dry and hot; injured by chinch-bugs. *Washington*: Many fields destroyed by chinch-bugs. *Wayne*: Badly damaged by drought and chinch-bugs. *Perry*: Nearly destroyed by chinch-bugs. *Schuyler*: Very little damaged by chinch-bugs, though these are very numerous. *Mercer*: Rapidly drying up. *Dodge*: Nearly average; late sown.

WISCONSIN.—*Greene*: Below average.

MINNESOTA.—*Meeker*: Look well; growing very stout. *Mower*: Flourishing since the June rains. *Wabasha*: Shortened by May drought. *Rock*: But slightly affected by grasshoppers.

IOWA.—*Marion*: Shortened by drought. *Henry*: Looks well. *Howard*: Early-sown very fine; late-sown injured by drought. *Taylor*: Rather short-strawed. *Tama*: Look finely. *Humboldt*: Injured by grasshoppers. *Webster*: A third of the oats in the northern part of the county destroyed by grasshoppers.

MISSOURI.—*Caldwell*: Promising, but threatened by chinch-bugs. *Cass*: Hundreds of acres destroyed by chinch-bugs. *Vernon*: Prematurely ripened by ravages of the chinch-bugs. *Saint Clair*: Chinch-bugs making havoc. *Greene*: Beginning to feel the drought. *Moniteau*: Chinch-bugs injurious. *Taney*: Injured by June drought. *Carroll*: Destroyed in many places by chinch-bugs. *Cape Girardeau*: Affected by drought. *Clinton*: Chinch-bugs. *DeKalb*: Chinch-bugs. *Montgomery*: Chinch-bugs bad. *Sage*: Injured by drought in May and June. *Miller*: Damaged by chinch-bugs. *Perry*: Failed from excessive rains at sowing-time and subsequent drought. *Potter*: In many places the chinch has made the crops not worth cutting. *Reynolds*: Shortened by drought. *Ripley*: Shortened by drought. *Newton*: Low; injured by chinch-bugs in some places. *Adair*: Fine. *Dallas*: Very short. *Laclede*: Shortened by drought in May; infested with chinch-bugs. *Pike*: Damaged by rust. *Crawford*: Prospect never so poor. *Clay*: Drought and chinch-bugs.

KANSAS.—*Douglass*: Mostly destroyed by chinch-bugs. *Allen*: Damaged by chinch-bugs. *Anderson*: Injured by chinch-bugs. *Barton*: Shortened by drought. *Bourbon*: Shortened by chinch-bugs. *Jefferson*: Injured by chinch-bugs. *Linn*: Damaged by chinch-bugs. *Montgomery*: Injured by drought. *Morris*: Threatened by chinch-bugs. *Sumner*: Injured by chinch-bugs. *Greenwood*: Badly injured by chinch-bugs. *Marion*: Light. *Osage*: Injured by chinch-bugs. *Wilson*: Cut down by chinch-bugs. *Atchison*: Greatly damaged by chinch-bugs. *Neosho*: Terribly injured by chinch-bugs.

NEBRASKA.—*Lincoln*: Looks well. *Antelope*: Very promising.

CALIFORNIA.—*Alameda*: Very good.

UTAH.—*San Pete*: One-fourth destroyed by cut-worms.

RYE.

Winter-rye is full average, or above, in most of the States, and very nearly average in several others. Its maximum condition is in Connecticut 116; and its minimum 88 in South Carolina. The New England, Middle, South Atlantic, and Gulf States generally show superior condition. The crop ranges above average also in the inland Southern States, in which grain and fruit crops suffered so disastrously. Spring-

rye is reported in none of the States south of the line of the Ohio River. In most of the other States it is full average, or above. Its maximum, 107, is in Oregon; its minimum, 78, in Minnesota and Kansas.

NEW YORK.—*Wyoming*: Largely winter-killed.

PENNSYLVANIA.—*Clearfield*: Fair. *Indiana*: Filling finely. *Lancaster*: Short.

MISSOURI.—*Madison*: Very good.

NORTH CAROLINA.—*Greene*: Good.

GEORGIA.—*Marion*: Better than for many years.

TEXAS.—*Burnet*: Disappointed expectations.

KENTUCKY.—*Jefferson*: Fine. *Shelby*: Above average in spite of drought. *Franklin*: As good as any previous crop. *Anderson*: About average. *Lincoln*: Good. *Graves*: Reduced by wet spring and dry June.

INDIANA.—*Floyd*: Extra good.

ILLINOIS.—*Woodford*: Injured by freezing. *Moultrie*: Good. *Humboldt*: Injured by grasshopper.

KANSAS.—*Douglas*: Winter-rye badly injured by chinchies.

BARLEY.

Winter-barley attains its highest average, 103, in Kentucky and Kansas. It is full average, or above, in Massachusetts, New York, Georgia, Michigan, Missouri, California, and Oregon. Its minimum is noted in Illinois, 87; it is reported in about half the States. Spring-barley shows its maximum in Oregon, 106, and its minimum in Ohio, 78. It is not reported in any State south of the Ohio River, nor in New Jersey and Indiana. In the Northwest it is generally somewhat below average, but on the Pacific coast it rises above.

NEW YORK.—*Livingston*: Needs rain. *Wyoming*: Backward and small. *Wayne*: Large and heavy.

PENNSYLVANIA.—*Tioga*: Shortened by drought.

TEXAS.—*Lamar*: Did not realize its early spring promise.

OHIO.—*Montgomery*: Good. *Sciota*: Better than for years; same fields yield from forty to sixty bushels per acre.

INDIANA.—*Floyd*: Extra good.

WISCONSIN.—*Douglas*: Somewhat drowned out.

IOWA.—*Marion*: Shortened by drought. *Humboldt*: Injured by grasshoppers.

NEBRASKA.—*Antelope*: Very promising.

CALIFORNIA.—*Napa*: Average retarded by winter rain, and yield shortened by dry north winds. *Alameda*: Promising. *Humboldt*: Retarded by wet spring.

UTAH.—*San Pete*: Injured by cut-worms. *Utah*: Injured by cut-worms.

POTATOES.

The acreage in potatoes is about 2 per cent. in advance of last year. The States showing an increase are Michigan, 121; Massachusetts and Kansas, 113; Connecticut, 112; South Carolina and Nebraska, 109; Ohio, 108; Indiana, 107; Iowa, 106; New York, 105; Maine, Illinois, and Missouri, 103; Vermont, Arkansas, and California, 102; Alabama, 101; North Carolina, Wisconsin, and Oregon report an acreage equal to last years; the other States show a decrease, the minimum, 85, being in Tennessee. The crop is reported in highest condition in Connecticut, 110; next Massachusetts and Nebraska, 108; Texas and Kansas, 106; Michigan, 103; Missouri, 102; New York, Florida, Wisconsin, and Iowa, 101; all the other States are below average, the minimum, 50, being in Kentucky; Tennessee reports 65; West Virginia, 71; Arkansas, 78; North Carolina, 84. The Colorado beetle is extending its destructive operations to the eastward, while in many sections of the West its virulence is unabated. In other localities, however, the nuisance seems on the decline. The persistent use of Paris-green and other remedies is reported as entirely successful in many places. The

presence of parasites, destroying the eggs of the beetle, is gratefully acknowledged in several counties. It is not at all improbable that the enormous multiplication of these beetles will call forth destructive enemies to feed upon them, and that thus the pest will be mitigated or removed by natural causes. The following notes have been compiled from our correspondence :

VERMONT.—*Caledonia* : Potatoes small and late.

MASSACHUSETTS.—*Berkshire* : Doing well, considering the late spring ; some plantings delayed till June 20. *Plymouth* : Look well, but ten days late.

NEW YORK.—*Cattaraugus* : Very promising ; beetles less injurious than was expected. *Madison* : Bugs on hand. *Tioga* : Bugs on hand, but have not done much damage yet. *Wyoming* : Promising ; bugs few and not very injurious. *Wayne* : Bugs on hand ; not very severe.

NEW JERSEY.—*Burlington* : Early plantings injured by drought, *Warren* : Tops growing well.

PENNSYLVANIA.—*Northampton* : Threatened by Colorado beetles. *Snyder* : Potato-bugs very bad. *Clearfield* : Bugs very injurious. *Perry* : Early plantings destroyed by bugs. *York* : Bugs very mischievous. *Philadelphia* : Colorado beetles in great numbers. *Adams* : Potato-bugs in great numbers, but kept in check with Paris-green. *Cameron* : Colorado beetles at work. *Chester* : The Colorado beetle shortening the crop. *Huntingdon* : Bugs numerous, but the early crop was rescued by great efforts from their destructive influence. *Lycoming* : Bugs very troublesome. *Wayne* : Bugs in some places. *Franklin* : Some early plantings ruined by bugs. *Butler* : Colorado beetles very injurious, but resisted in a great variety of ways. *Armstrong* : Threatened by bugs. *Union* : Bugs at work ; here called the California bug. *Dauphin* : Bugs injured early crops, but are disappearing, and leaving the later plantings uninjured. *Forest* : Colorado beetles leaving ; crops not much injured. *Indiana* : Doing well in spite of bugs ; not much damage. *Lancaster* : Considerably injured by bugs. *Beaver* : Bug and drought threaten the whole crop. *Elk* : Look well ; first brood of Colorado beetles too young to do much injury. *McKean* : Bugs threaten total destruction. *Luzerne* : Bugs ; Paris-green somewhat successful.

MARYLAND.—*Frederick* : Injured by beetles ; may be an entire failure. *Caroline* : Threatened by Colorado beetles. *Baltimore* : Colorado beetles at work, but successfully resisted with Paris green. *Carroll* : Considerable damage from Colorado beetles. *Wicomico* : Crop promising. *Montgomery* : Colorado beetles. *Harford* : Colorado beetles very general, but will not be so injurious as was thought ; great efforts to destroy them ; crop suffering also from drought. *Prince George* : Colorado beetles have just come. *Queen Anne* : Colorado beetles too late for serious damage in early potatoes, but are demonstrating against the tomato-crop. *Cecil* : Colorado beetles doing considerable damage.

VIRGINIA.—*Warwick* : suffering from drought. *Dinwiddie* : Early crop injured by April frosts. *Fauquier* : Threatened by Colorado beetles ; great efforts to keep them down. *Prince William* : Threatened by Colorado beetles ; farmers afraid of Paris green. *Prince George* : Injured by drought. *Clarke* : Early potatoes almost a failure from drought. *Campbell* : Good, but short. *Culpeper* : Colorado beetles. *Highland* : Injured by drought and a very destructive bug. *Henrico* : Shortened by drought. *Haywood* : Injured by drought.

NORTH CAROLINA.—*Allamance* : Poor.

GEORGIA.—*Upson* : Fair. *Pickens* : Killed by late frosts. *Wilkinson* : Fine.

FLORIDA.—*Wakulla* : Fine season for growing sweet potatoes. *Gadsden* : Unusual acreage planted in Irish potatoes, and the yield, both in quality and quantity, surpassed the most sanguine expectations ; one field averaged 300 bushels per acre, some of the single tubers weighing twenty-three ounces. A second crop is frequently planted about the last of August and matures before frost. Our potatoes, with proper care, keep very well. The sweet-potato crop is rapidly increasing in acreage, as the propagation by slips will last till August. The root-planted crop is in fine condition. With proper facilities for transportation Gadsden County would find the sweet-potato crop a valuable industry. The best varieties bring from thirty to forty cents per bushel. *Jackson* : Recent rains have caused a great extension of sweet-potato culture.

ALABAMA.—*Montgomery* : Sweet potatoes doing well. *Clarke* : Irish potatoes never better.

LOUISIANA.—*Franklin* : Sweet potatoes late in maturing.

TEXAS.—*Austin* : Good though shortened by drought. *Bee* : Crop matured before the drought ; yield unprecedented. *Burnet* : Greatly injured by frost.

ARKANSAS.—*Jackson* : Cut down half already by drought. *Bradley* : Irish and sweet potatoes reduced by drought to half a crop. *Independence* : Suffered severely from drought. *Hempstead* : Very few sweet potatoes planted yet. *Washington* : Both Irish and sweet potatoes suffered from drought. *Sebastian* : Injurious drought.

TENNESSEE.—*Grainger* : Shortened by drought. *Hardin* : Injurious drought. *Monroe* : Ruined by drought in April. *Laurence* : Potatoes a total failure from drought and bugs.

Bradley: Potatoes nearly destroyed by the May drought and bugs; sweet potatoes very promising.

WEST VIRGINIA.—*Harrison*: Good rains will make a large crop in spite of the bugs. *Preston*: Infested with bugs; hand-picking the only remedy used. *Brooke*: Drought has almost ruined the crop saved from the bugs with such great effort. *Nicholas*: Cut down half by drought. *Cabell*: Early plantings about ruined by drought and bugs. *Hardy*: Early plantings injured and later threatened by the Colorado beetle. *Hancock*: Colorado beetles very destructive; Paris green the only successful remedy. *Jefferson*: Colorado beetles still destructive. *Braxton*: Potatoes planted in March not so promising as those planted in May.

KENTUCKY.—*Jefferson*: Nearly destroyed by Colorado beetles. *Shelby*: Will be an entire failure if rain does not come soon. *Hardin*: Ruined by drought and bugs. *Harrison*: Almost ruined by bugs. *Taylor*: Crop nearly ruined by Colorado beetles. *Anderson*: Greatly shortened by drought and Colorado beetles. *Lincoln*: Almost ruined by drought and Colorado beetles. *Grant*: Almost a failure through Colorado beetles. *Graves*: Will hardly return their seed. *Russell*: A complete failure. *Rockcastle*: Almost a failure. *Scott*: Almost destroyed by bugs. *Spencer*: Attacked by bugs twenty-seven days earlier than last year.

OHIO.—*Trumbull*: Better than last year; bugs numerous, but successfully resisted; not much damage done. *Delaware*: Drought and bugs. *Monroe*: Will be destroyed if the drought continues. *Crawford*: Doing finely. *Erie*: Bugs plenty, but killed with Paris green; our potatoes have never failed. *Lucas*: Colorado beetles numerous; Paris green a successful exterminator. *Meigs*: Suffering from drought.

MICHIGAN.—*Lenawee*: Colorado beetles threatening the crop. *Antrim*: Bugs plenty. *Bay*: Bugs troublesome. *Van Buren*: Colorado beetles less numerous; kept in check with Paris green. *Tuscola*: Promising; bugs less numerous than formerly. *Cass*: Promise to more than meet home-demand.

INDIANA.—*Elkhart*: Planting deterred by the bugs. *Perry*: Early plantings; no crop. *Washington*: Shortened by drought. *Harrison*: Early plantings failed. *Cass*: Colorado beetles less numerous than when they first appeared this season. *Clay*: Colorado beetles less troublesome than for two years past. *Floyd*: Few and small. *Jasper*: Colorado beetles less destructive than usual. *Marion*: Colorado beetles did little damage on account of strenuous efforts for their destruction. *Whiteley*: A big crop promised.

ILLINOIS.—*Cumberland*: Colorado beetles and old-fashioned potato-bugs are numerous. *Hancock*: Potato-bugs have been bad, but are decreasing. *Kankakee*: Bugs not so bad as in the last two years. *Macon*: Promise better crop than for last two years; bugs doing but little damage. *Madison*: Very few Colorado beetles, but a new enemy in the form of black lice greedily eating the tops. *Tazewell*: Bugs plenty; destroying them with Paris green. *Carroll*: Colorado beetles checked by the rain, and the great efforts made for their destruction. *Henderson*: Will soon dry up. *Ogle*: Colorado beetles have mostly disappeared. *Putnam*: Parasites have destroyed the eggs of the Colorado beetles. *Wayne*: Colorados injurious. *Pulaski*: Early plantings almost a total failure, owing to extreme drought.

WISCONSIN.—*Pierce*: Bugs thick as ever. *Walworth*: Reduced below average by Colorado beetles. *Clark*: Colorado beetles destructive. *Dodge*: Do well in spite of innumerable Colorado beetles. *Douglas*: Colorado beetles have come in great numbers, but men, women and children are fighting them. *Green Lake*: Bug war still continues. *Door*: Colorado beetles not so injurious, but the black potato-bug is worse. *Outagamie*: Colorado beetles and black beetles very injurious, especially the latter.

MINNESOTA.—*Steele*: Colorado beetles at work, but not very injurious. *Chisago*: Colorado beetles very numerous. *Meeker*: Colorado-beetles destructive. *Sibley*: Good in spite of bugs.

IOWA.—*Cass*: Some Colorado beetles, but a plentiful use of Paris green will secure a large crop. *Howard*: Colorado beetles in full force. *Mahaska*: Look very fine. *Clinton*: Fewer potatoes planted, and bugs more numerous than usual.—*Tama*: Colorado beetles as numerous as ever.

MISSOURI.—*Greene*: Drought affecting the crop. *Phelps*: Some bugs reported both in potatoes and sweet potatoes. *Adair*: Fine.

KANSAS.—*Mitchell*: Lady-bugs destroying the eggs of the Colorado beetle. *Woodson*: Colorado beetles very threatening. *Wyandot*: Very fine, but need rain. *Barton*: Crop of extra promise till June 15, when it was attacked by the large green tobacco-worm. Not over a half crop will be harvested. *Ellsworth*: Will be a failure if the drought continues. *Jackson*: Threatened by drought. *Sumner*: A large worm is destroying the vines. *Greenwood*: Crop injured by Colorado beetles and a slender slate-colored bug, (probably one of the *Cantharidae*.)

NEBRASKA.—*Antelope*: Ravaged by Colorado beetles and tobacco-worms. *Thayer*: Potatoes and tomatoes badly injured by Colorado beetles.

CALIFORNIA.—*Alameda*: First crop ran to tops.

OREGON.—*Clackamas*: Injured by excessive rains. *Columbia*: Potato blight has appeared. Earlier kinds too far advanced. Late plantings hardly worth digging.

WOOL.

The wool-clip was larger than last year. In Nebraska, 151; Oregon, 124; California, 120; Connecticut, 117; Minnesota, 110; Texas, 104; Massachusetts, Louisiana, and Indiana, 103; Arkansas and Missouri, 102; South Carolina, 101. It was equal to last year in New Jersey, Michigan, and Iowa. The greatest decrease, 11 per cent., was in Vermont. Among the larger wool-producing States Ohio decreases her clip 3 per cent.; Illinois, 4 per cent.; New York and Pennsylvania, 2 per cent.; Wisconsin, 3 per cent.; Kentucky, 9 per cent. There is a very marked increase of wool production in the States west of the Mississippi and on the Pacific coast.

VIRGINIA.—*Northumberland*: Without protection from dogs the wool industry must perish. *Page*: Worthless dogs are cutting down the flocks of sheep.

NORTH CAROLINA.—*Transylvania*: Wool of better quality and sheep in better condition than last year. *Lincoln*: Many sheep killed by dogs. O for a stringent dog-law!

GEORGIA.—*Worth*: Sheep dying out.

TEXAS.—*Victoria*: Wool production increasing. *Nueces*: Large increase in sheep husbandry.

OHIO.—*Marion*: Fleeces from three-quarters of a pound to a pound lighter average than last year. Assessor reports 12,000 sheep less than last year. A large percentage died. The flocks were poorly kept on short feed and poor corn. *Monroe*: Wool in improved condition; better care of sheep.

MICHIGAN.—*Calhoun*: Looks well.

ILLINOIS.—*Winnebago*: Lightest clip in proportion to the number of sheep for many years back.

WISCONSIN.—*Fond du Lac*: Clip heavier than usual per sheep; but this is because of the number lost. One farmer lost 757.

TOBACCO.

The severe drought prevailing in sections specially devoted to tobacco-culture, together with the destruction of plants by insects, has reduced the acreage in this crop to less than half of that of 1873. The only tobacco State showing an increased acreage is Maryland, 109. The heaviest reduction is found in Kentucky, which returns an acreage of but 26 per cent. of the previous year. As Kentucky produced two-fifths of the last census crop, this reduction is significant of a thorough and extensive demoralization of the tobacco interest. Tennessee makes almost as gloomy a return, 31 per cent.; Ohio, 33; Massachusetts, 50; Indiana, 58; Virginia, 61; West Virginia, 62; North Carolina, 65; Pennsylvania, 79; Illinois, 87; Missouri, 88; New Hampshire, 89; Connecticut and New York, 90. The condition of the crop planted is above average in only two States: Connecticut, 110, and Alabama, 103; it is full average in Massachusetts, but in all the other States it is below, the minimum, 42, being in Kentucky. West Virginia reports 62; Tennessee and Ohio, 69; Virginia and North Carolina, 79; Texas, 88; New York, 91. In some localities early-set plants look promising, but later ones look poorly, on account of insect injuries and drought. In other places the low prices of last year greatly discouraged planting. In portions of North Carolina the tobacco-culture, once a flourishing industry, is reported as dying out. In Greene, Tennessee, the crop has nearly ceased, on account of the law forbidding sales to any but manufacturers and shippers. Our Kentucky correspondence, especially, is full of gloomy accounts and presages in regard to the crop. How far the present reports are influenced by the panic prevailing in the tobacco regions it is now impossible to say. It seems sufficiently clear that in the most hopeful aspects of the case the aggregate yield will be much less than half of

last year's, even if the conditions of growth should be most favorable for the remainder of the season.

The following notes from our correspondence will give some of the more striking local aspects of this crop:

PENNSYLVANIA.—*Cumberland*: Acreage limited by drought. *Lancaster*: Crops discouraged by low prices.

MARYLAND.—*Charles*: Great scarcity of plants. *Montgomery*: But little tobacco planted, on account of drought and scarcity of plants; probably not a half crop will be set out. *Calvert*: About 75 per cent. of a crop set out; plants looking well. *Prince George's*: A large proportion of the crop not planted.

VIRGINIA.—*King William*: Acreage diminished by failure of plant-beds. *Powhatan*: Plants nearly all destroyed by the fly; not a third of a crop will be planted. *Flucanna*: Lack of plants will cut down the acreage one-half. *Orange*: Late planting and scarcity of plants will cut down the crop. *Mecklenburgh*: Early-set plants look well; later have considerably died out, with little prospect of re-setting from the scarcity of plants. *Prince George*: Stunted, but healthy. *Prince Edward*: Failure of plants. *Pittsylvania*: Season very discouraging. *Campbell*: Prospect bad; much tobacco-land was put in corn. *Henry*: A third of a crop planted. *Lunenburg*: Three-fourths of a crop planted; plants inferior. *Madison*: Half-crop planted. *Halifax*: Unprecedented failure of plants.

NORTH CAROLINA.—*Person*: Scarcity of plants cut down the acreage one-half. *Caswell*: Planting reduced one-half; fly destroyed the plants. *Randolph*: Crop growing weaker every year; will soon be raised only for medicinal purposes. *Warren*: Plants injured by late spring. *Haywood*: Shortened by drought. *Madison*: Acreage and condition reduced by drought.

FLORIDA.—*Gadsden*: Cuba tobacco made a poor stand, but the plants are growing well.

TEXAS.—*Austin*: Backward; drought.

TENNESSEE.—*Greene*: Tobacco-growing has nearly ceased since the enactment of the law forbidding sales to any except manufacturers and shippers; grown mostly for home consumption. *Montgomery*: Almost an entire failure.

WEST VIRGINIA.—May drought fatal to tobacco-seeds; have never known plants so scarce. *Cabell*: A small black fly destroyed nearly all the tobacco-plants. *Randolph*: Nearly a failure.

KENTUCKY.—*Shelby*: Want of plants, and of a season for setting them, will make an extraordinarily short crop. *Adair*: This county produced, last season, 2,300,000 pounds; up to June 25 not over 25 acres had been planted; flies destroyed many plants, others dried up. *Bracken*: Flies, bugs, and drought have almost entirely prevented tobacco-planting; plants set out died; not over a fourth of a crop. *Taylor*: A failure; plants destroyed by fly. *Anderson*: Badly injured by drought. *Christian*: No tobacco set as yet; plants burned up in their beds; those set dried up. *Hopkins*: Not over a tenth of a crop. *Warren*: Shortened by nine weeks' drought. *Carroll*: Drought prevented the setting out of plants. *Grant*: Almost a failure through the fly. *Graves*: Only a fifth of the usual acreage. *Logan*: Almost an entire failure. *Marion*: Too dry to put out tobacco; drought since May 15. *Mason*: Almost a failure; plants scarce and dying in the bed; too late now to set them. *Russell*: A complete failure. *Edmonson*: Fly destroyed more than half the tobacco-plants; not a tenth of a crop will be made. *Owen*: Tobacco is our great staple; drought destroyed two-thirds of the plants, and it is already late for transplanting. *Grayson*: Not a fiftieth part of a crop planted; nine weeks' drought. *Henry*: Not a fourth of a crop will be planted, and the plants mostly destroyed. *Trimble*: Damaged by the fly. *Metcalf*: None planted; no rain since May 6. *Gallatin*: Plants mostly destroyed by worms; very little tobacco planted.

OHIO.—*Vinton*: Drought and fly destroyed most of the plants. *Monroe*: Drought; not over a fourth of a crop. *Guernsey*: Almost an entire failure, from the great yield and low prices of last year, and from the efforts of eastern dealers to discourage planting this season; to say nothing of the failure of plants through drought.

WISCONSIN.—*Dane*: Growth discouraged by low prices; much difficulty in getting plants; much of the seed did not germinate.

IOWA.—*Humboldt*: Injured by grasshoppers.

MISSOURI.—*Randolph*: Looks well. *Adair*: Looks well.

SUGAR-CANE.

Six States report the cultivation of sugar-cane, in all of which the acreage has been increased, viz: Alabama, 131; Mississippi, 120; Texas, 110; Georgia, 103; Louisiana, 104; Florida, 103. The condition in all these States is above average, viz: Louisiana, 108; Mississippi and Texas, 105; Florida, 104; Alabama, 102; and Georgia, 101. It is the prevalent opinion that the Louisiana sugar-product will be equal to that of 1873, notwithstanding the overflow.

SORGHUM.

Alabama has increased her acreage 11 per cent.; Minnesota, 9 per cent.; Texas, 6 per cent.; Mississippi and Arkansas, 5 per cent.; Kansas, 1 per cent.; Delaware reports the same acreage as last year. In other States there is a decline, the minimum, 77 per cent., being in Maryland. New England, New York, New Jersey, Pennsylvania, South Carolina, Florida, Louisiana, California, and Oregon make no returns of the crop. The condition is 1 per cent. above average in Texas; full average in Delaware, Michigan, and Wisconsin; in the other States it is deficient, Kentucky showing the greatest decline, 43 per cent. below average. Several counties in different parts of the country report a declining interest in sorghum-culture.

FRUIT.

The fruit-crop has suffered from a number of casualties during the past season. The bloom was uncommonly full in most of the counties reporting, but for some reason the fruitage in a large number of cases was small. Late spring frosts and destructive insects are reported as the specific causes of the decline in such cases.

APPLES.—Apples are above average in Arkansas, 121; Connecticut, 120; Maine, 110; New Jersey, 105; Kansas, 105; New York, 103; Texas, 103; Nebraska, 101; below in all the other States, (Florida making no return.) The lowest condition is in Virginia, 47 per cent. below average. Here an unusual number of counties report late and destructive frosts. The same cause reduced the crop in North Carolina 32 per cent. below average; in Georgia, 24 per cent.; in West Virginia, 23 per cent. Indiana reports a discount of 23 per cent., mostly from insect ravages, although a few counties show very large crops. Illinois shows a decline of 20 per cent. below average; in many counties the fruit, after forming, dropped off, leaving in many cases but a small fraction of an average crop. Tennessee shows an equal decline from the same cause.

PEACHES.—The crop is above average in Nebraska, 122; Arkansas, 121; Kansas, 120; Connecticut, 115; Ohio, 112; Michigan, 110; Iowa, 110; Missouri, 106; Texas, 102. It is full average in Oregon, and below in all the other States. The greatest depreciation is found in Delaware, one county of which reports the condition 70 per cent. below average. In Virginia the loss is 63 per cent., the result of late spring frosts. The same cause in North Carolina resulted in a depreciation of 40 per cent., and in Maryland of 39 per cent. Hailstones, excessive rains, and insect ravages reduced the crop of Mississippi 35 per cent. below average. West Virginia reports an equal loss; Louisiana a depreciation of 32 per cent.; Kentucky, 26; Georgia, 24; Alabama and Indiana, 22. In many of the northwestern counties the depreciation of the peach-crop is referred to the loss of trees from the severe freezes of the last two or three winters. A tendency of the fruit to fall from the trees after blooming is extensively noted.

GRAPES.—Grapes have had fewer casualties than apples or peaches, and, consequently, present a closer approximation to a uniform average condition. The highest average, 121, is in Florida, in several counties of which grape culture is extending, and showing very satisfactory results. California reports a condition 11 per cent. above average; Missouri, 10; Maryland, 9; Arkansas, Nebraska, and Minnesota, 7; Maine and Ohio, 6; Texas and Michigan, 4; Pennsylvania, 3; Indiana and Kansas, 1. Vermont is full average, and all the other States

below. The greatest depreciation, 17 per cent., is found in Georgia. North Carolina reports 15 per cent. loss. Nearly all the other States are less than 10 per cent. below average. Frosts and insects are assigned as the causes of these losses. The general aspects of this crop, however, indicate a decided improvement.

STRAWBERRIES.—Strawberries are 25 per cent. above average in Connecticut, 19 per cent. in California, 10 per cent. in Massachusetts, 6 per cent. in New York, 5 per cent. in New Jersey, 2 per cent. in Texas, 1 per cent. in Florida. In all the other States the crop is below average. The drought, which was so disastrous to the summer-crops of Kentucky, reduced the strawberry-crop to 68, the lowest State average returned. Tennessee, from similar causes, is reduced to 72; Maine, to 73, tent-caterpillars being very destructive in several counties. West Virginia reports 77; Louisiana, 79; Delaware, 80; Kansas, 81; Ohio, 82; Virginia, 83; Alabama and Minnesota, 85; North Carolina and Mississippi, 86; Iowa, 87; Indiana, 89. In some quarters, where full yields were noted, it is complained that the conditions of growth were such as to precipitate the crop upon the market, glutting it for a week and then leaving it entirely destitute. In California some second crops were blasted by north winds.

MAINE.—*Franklin*: Tent-caterpillars injuring fruit-trees; it is stated that in Somerset County they have defoliated 1,000 acres of poplar-trees. *Androscoggin*: Apples and grape fine; strawberries light.

NEW HAMPSHIRE.—*Hillsborough*: Small fruit very abundant.

VERMONT.—*Grand Isle*: Apples and pears have just begun to grow.

MASSACHUSETTS.—*Plymouth*: Apples in fine condition, except a few orchards infested with canker-worms; our few peach-trees are loaded with fruit.

CONNECTICUT.—*Windham*: Cranberry culture extending. *New London*: Apples promise an abundant crop; peaches doing finely; grapes excellent.

NEW YORK.—*Steuben*: Fruit promises better than cereals, especially grapes. *Washington*: Small fruits will be light.

NEW JERSEY.—*Hudson*: Apple bloom copious, but much of the fruit has fallen; peaches injured by late season, as also grapes; strawberries better in quantity than quality. *Burlington*: Apples falling from early drought; cherries better than for years; the trees appear to be recovering. *Warren*: Some over-blooming apple-orchards failed. *Camden*: Strawberries unprofitable; season short and hot, throwing the whole crop into market at once.

PENNSYLVANIA.—*Bucks*: Apple-crop generally promising, but the "Smith's cider" will yield lightly; drought hard on our few peaches. *Washington*: Apples not a fourth of a crop; grapes and cherries better than usual. *Cameron*: Peaches destroyed to a considerable extent by the rose-bug; grapes and apples less affected. *Indiana*: Apples and peaches a half crop; fallen off from late frosts or dry weather. *Lancaster*: Apples, pears, peaches, and grapes promise abundantly, but caterpillars are very bad. *Tioga*: Apples falling off badly.

MARYLAND.—*Caroline*: Immense crop of strawberries; peaches an entire failure. *Baltimore*: Apples dropped exceedingly during June; grapes present a luxuriant growth; Concord the popular variety. *Dorchester*: Peaches an entire failure through late frosts; apples and grapes promise an abundant yield; strawberry-crop 50 per cent. greater than last year. *Talbot*: Peach-crop short; abundant apple-bloom, but the fruit fell off badly. *Wicomico*: Apples and peaches scarce; strawberry-crop large and profitable. *Queen Anne's*: Peaches a total failure; grapes and strawberries very abundant. *Culvert*: Peaches a failure. *Cecil*: Apples and peaches blighted and falling from the trees.

VIRGINIA.—*Powhatan*: All peaches and early apples destroyed by frosts. *Fluvanna*: All fruit, except grapes, destroyed by frosts. *Sussex*: Peaches and most of the apples destroyed by frost. *Spotsylvania*: Apple-crop short. *Dinwiddie*: Apples and peaches mostly killed and strawberries injured by frost; grapes abundant. *Floyd*: Cranberries grow abundantly without cultivation. *Fauquier*: Apple-crop fair; no peaches, cherries, plums, or pears. *New Kent*: Fruit-crop a failure. *Charles City*: Peaches and apples frost-killed. *Elizabeth City*: All fruits frost-killed, except strawberries and grapes. *Prince George*: Apples and peaches almost complete failures. *Prince Edward*: Apples and peaches frost-killed. *Highland*: Heavy bloom, but poor crop. *Greenville*: Apples and peaches almost a failure; wild grapes abundant. *King and Queen*: But little fruit, except grapes. *Henrico*: Grapes fine, but other fruit short. *Buchanan*: Apples and peaches mostly killed in bloom by snow and frost of April 28.

NORTH CAROLINA.—*Haywood*: Peaches and apples almost a failure. *Madison*: Apples and peaches mostly frost-killed. *Macon*: Apples and peaches almost destroyed by frost. *Carteret*: Half the apples and peaches killed by April frosts. *Person*: General failure;

mostly frost-killed. *Tyrrell*: Apples, peaches, and grapes mostly ruined by late frosts and cold wet spring. *Chatham*: Grapes destroyed in many cases by April frosts. *Greene*: Apples and peaches almost a total failure. *Chowan*: Fruit of all kinds almost a failure. *Warren*: Fruit killed by late frosts. *Moore*: Half the fruit frost-killed in places.

SOUTH CAROLINA.—*Greenville*: Injured by April frosts; strawberries killed by heat and drought of May. *Lexington*: Strawberries good, but failed in the middle of June. The Seth Boyden variety, from the Department, is well suited to our climate.

GEORGIA.—*Montgomery*: Fruit frost-killed. *Cobb*: Fruit a half-crop. *Dooly*: All kinds of fruit damaged by late frosts and a late cold spring. *Carroll*: Killed by late frosts and wet spring.

FLORIDA.—*Columbia*: Not over half a crop, and that inferior and wormy from late frosts. *Jackson*: Apples and peaches injured by changes of weather during bloom. *Gadsden*: Grape-culture extending; established vineyards have produced satisfactory yields.

ALABAMA.—*Greene*: Not heavy, but good. *Mobile*: Ordinary varieties of grapes are 25 per cent. below average; the Scuppernong, 5 per cent. above; figs are above average; melons and pears below. *Saint Clair*: Grapes rotting. *Montgomery*: Apples and peaches rotting; grapes and strawberries very good; blackberries abundant. *Calhoun*: Nearly all fallen off.

MISSISSIPPI.—*Amité*: Fruit-crop greatly damaged by hail-storms. *Harrison*: Peaches demoralized by excessive rain; oranges very promising. *Grenada*: All kinds of fruit better than last year. *Tallahatchee*: Fruit-crops destroyed by caterpillars resembling the "army" worm, but smaller. *Copiah*: Cut short by rain and late frosts. *Smith*: Grapes rotted, except Scuppernong.

TEXAS.—*Austin*: Native grape-vines, especially Concord, are loaded with fruit; foreign grapes also beginning to ripen; several orchards of apples lately planted. *Bosque*: Peaches mostly frost-killed. *Victoria*: Peaches falling badly; trees vigorous and healthy; the most abundant grape-crop yet produced. *Bexar*: Largest grape-crop ever known. *Lamar*: Peach-crop good. *San Jacinto*: Orchards receiving more attention. *Williamson*: Peaches a full yield, but fruit small, owing to the drought; Hale's Early just ripe; three weeks later than in 1872.

ARKANSAS.—*Bradley*: Apples bloomed well, but the fruit dropped off. *Izard*: Grape-culture but little attended to; would be profitable; also strawberries. *Yell*: Blight or rot is destroying cultivated grapes.

TENNESSEE.—*Bedford*: Grapes very light. *Grainger*: Apples and peaches falling off; infested with curculio. *Lawrence*: Peaches a total failure.

WEST VIRGINIA.—*Preston*: Fruit injured by late frosts. *Brooke*: Apples bloomed profusely, but the fruit fell off badly. *Monroe*: Apples, half a crop; injured by insects; peaches almost a failure; grapes recovering from May frosts. *Nicholas*: Fruit-crops light, but good. *Marion*: Apples fall from the trees on account of the cold, dry May. *Jefferson*: Fruit prospects not so favorable as a month ago; grapes doing better than other kinds; pears scarce. *Pendleton*: Apples and peaches injured by late frosts. *Monongalia*: Short crop of apples and peaches. *Braxton*: Fruit injured by freezing weather of April.

KENTUCKY.—*Jefferson*: Fruit-crops look well. *Franklin*: Fruit greatly injured by numerous destructive insects. *Logan*: Fruit of all sorts continually dropping off.

OHIO.—*Trumbull*: Fruit never more promising. *Vinton*: Cold in May caused apples to drop; strawberries almost burned up; hottest June ever known here; thermometer above 90° for thirteen days, and for two days 102°. *Jackson*: Apples doing badly. *Highland*: Much damage to fruit and fruit-trees by the black measuring-worm. *Licking*: Apples falling off; strawberries very short; June 23 the hottest day—104° in the shade. *Montgomery*: Apples dropping; peaches hang better; grapes in fine condition. *Medina*: Apples and peaches never better. *Crawford*: Apples falling off considerably; curculio pest on the wane. *Hancock*: All fruit-crops superabundant. *Mahoning*: Too dry for small fruits. *Marion*: Apples poor; trees blighted; grapes never better. *Meigs*: Half the apples have fallen off. *Columbiana*: Apples and peaches almost ruined by drought.

MICHIGAN.—*Antrim*: Plums, cherries, and blackberries in abundance. *Hillsdale*: Apples shortened by hot weather. *Ionia*: Apples greatly injured by an unknown insect. *Van Buren*: Fruit of all kinds abundant. *Tuscola*: Apples dropping badly. Grapes and small fruit promise abundantly. *Wayne*: Fruit of all sorts abundant.

INDIANA.—*Elkhart*: Not the bearing-year for apples. Peach-trees full of fruit. Grapes bore heavily last year, and are consequently light. Strawberries always good. *Howard*: Peach-crop heavy; the first in seven years. Apples scarce. *Perry*: Apples damaged by insects. *Posey*: Apples, peaches, and strawberries frosted; insects injuring fruit. *Putnam*: Peaches at first promised finely, but are dropping off badly. Apples and small fruits doing well. *Ripley*: Apples and peaches have fallen badly, but will leave a fair crop. Pears and cherries good and plenty. *Shelby*: Apples have fallen badly. *Washington*: Apples light; peaches almost a failure. *Hamilton*: Apples and pears injured by some insect. *Noble*: Apples scarce. *Pike*: Apples scarce and poor; berries fair; pears scarce; grapes doing well. *Steuben*: Peaches promise well. *Scitelerland*: Fruit-crops promise to be enormous. *Franklin*: Apples dropped badly. *Whitley*: Apples dropped; peach prospect unusually fine.

ILLINOIS.—*McLean*: Trees all bloomed, but did not set, and the fruit is falling off. *Bureau*: Apples a half-crop. Peaches few, but look well. *Hancock*: Curculio is more destructive than ever; codling-moths less numerous. *Stephenson*: A fair show of almost all sorts of fruit. *Saint Clair*: Apples almost a failure compared with their bloom. Concord grapes rotting. A new insect has appeared on the Norton. *Montgomery*: Strawberries lasted only a week, and then a luxuriant crop dried up; apples almost a failure. *Moultrie*: Apples promising. Young peach-trees will have a fair crop; old trees dead. *Putnam*: Apples dropped off to a third of a crop. *Morgan*: Fruit prospect has declined within two weeks. *Ogle*: Unpromising. *Vermillion*: Apples dropped off. *Wayne*: Apples and peaches have fallen short. *Piatt*: Apples have fallen badly.

WISCONSIN.—*Walworth*: Fruit a failure; usually precarious. *Brown*: A singular disease affecting fruit-trees; limbs dying gradually from the top. *Juneau*: Best apple-crop we have yet had. *Fond du Lac*: Copious apple-bloom, but blown off by east winds.

MINNESOTA.—*Goodhue*: Apples have not recovered from the injuries of 1873; trees still dying. *Jackson*: Nearly all the berries eaten.

IOWA.—*Marion*: Apples fallen from the trees; cherries, full crop; insects destroying plums; grapes and small fruits good. *Marion*: Apples, cherries, and small fruit grow well here. *Lee*: Peach-trees full. *Van Buren*: Small fruits abundant. *Marshall*: Apple-trees dying; raspberries winter-killed; grape-vines never before so loaded with fruit. *Des Moines*: Orchards doing nearly nothing; strawberries ruined by drought. *Harrison*: Apple-trees injured by grasshoppers; many trees set out in the spring have been killed. *Howard*: Apples have not recovered from the freeze of last year; gooseberries remarkably fine and plentiful. *Guthrie*: Copious apple-bloom, but light crop. *Hardin*: Strawberry and grape-vines largely killed by drought last fall. *Jefferson*: Good prospect of apples destroyed by worms.

MISSOURI.—*Texas*: Peaches, apples, and grapes 50 per cent. better than last year. *Platte*: Apple-bloom copious, but few trees have any fruit, and those shedding; a small worm is found in each falling apple. *Caldwell*: Prospects remarkably good. *Saint Clair*: Peaches have fallen badly. *Nodaway*: A beetle destroyed many of the apples about the middle of June. *Moniteau*: Peaches and apples dropping; leaves crisped and drying; probably the work of some insect. *Daviess*: Apples dropping; injured by worms; peaches promise a most extraordinary crop. *De Kalb*: Apples blasted, but peaches a fine yield. *Johnson*: Apples a good crop generally; peaches mostly failed; grape-culture increasing. *Marion*: Splendid bloom, but light yields. *Phelps*: Apples and peaches have fallen badly. *Adair*: Peaches and grapes abundant. *Cole*: Fruit a good average; early harvest-apples already gone. *Pike*: Fine apple-bloom, but poor yield. *Jasper*: Seedling-peaches, on prairie lands, were killed by protracted spring cold, while bedded trees are well filled, raising the crop to half average.

KANSAS.—*Leavenworth*: Immense crop of apples, peaches, and cherries; small fruits injured by fall drought and winter-freezing. *Douglas*: All varieties of cherries have produced abundantly; peaches, plums, and grapes will also yield large crops. *Nemaha*: Fruit-crops never better. *Wyandotte*: Fruit abundant. *Bourbon*: Apples abundant; peaches leaf-blighted and dropping off, but will be sufficient for home consumption; grapes look splendidly. *Doniphan*: Fruit materially injured by south winds while in bloom. *Jackson*: Fruit-crops generally fine, but strawberries poor; grapes splendid. *Montgomery*: Peaches and strawberries suffering from drought. *Washington*: Rose-bugs injured tame grapes; afterward a worm denuded the vines of leaves and fruit. Peaches and small fruits abundant. *Butler*: Peach-crop large.

CALIFORNIA.—*Napa*: Curl-leaf injured peaches; apples short; extraordinary yield of grapes. *Sacramento*: Peaches injured severely by curl-leaf; many orchards along the streams injured by seepage-waters, from overflow; second crop of strawberries destroyed by the north winds. *El Dorado*: Fruit-crops much increased; fine growing rains. *Alameda*: Grapes looking very well; promise the largest crop yet known.

UTAH.—*Box Elder*: Apricot-crop heavy; fruit generally promising. *Salt Lake*: Codling-moth as destructive as last year on apples and pears; a destructive worm attacking the grapes. *Utah*: Apple-blossoms blown off by high winds. Early peaches frost-killed.

HAY AND PASTURES.

Timothy is in highest average condition in Connecticut, 118; and above average in New York, 106; Vermont, 104; Massachusetts, 103; and Nebraska, 101. It maintains an average in Delaware, Maryland, California, and Oregon. Its minimum condition is found in Kentucky, 55, where it was depleted by the severe drought; West Virginia stands but little higher, 62; Tennessee, 70; Ohio, 71. North of the Ohio River it is uniformly below average, reaching its highest figure, 98, in Michigan. The severe drought, as well as spring-frosts here,

injured the crop. West of the Mississippi the crop is generally better, while on the Pacific coast it attains a full average. In some of the Northern States, both east and west, the crop suffered from winter-killing.

Clover seems to have suffered somewhat less from drought and other injuries than timothy. Its highest condition, 109, is in Massachusetts; in Maryland and California it stands at 108; Oregon, 107; Connecticut 106; Pennsylvania, 105; New Jersey and Nebraska, 102; New Hampshire, 101; Delaware, 100. It is very near average in Missouri, 99; Virginia, Alabama, Illinois, and Iowa, 98. Its minimum is found in Kentucky, 60. The low averages of Tennessee, 73, and West Virginia, 75, also show that the most unfavorable conditions of growth were south of the line of the Ohio. In the Northwest the general condition is below average, but improves toward the West. The Pacific coast is above average.

Pasture shows a higher average than mown grass, indicating, on the whole, a more favorable condition of grass-growth as the season advanced. This crop suffered from severe drought in the earlier part of the season in a large number of counties. In the New England and Middle States it stands full average or above, except in Pennsylvania, 88. Seasonable showers, especially on the eastern shore, enabled Maryland to maintain her high average, 108. In the South Atlantic States drought reduced the condition below average, except in Georgia, 103. Of the Gulf States Alabama and Texas are slightly above average, the rest being below. To the northward the severe drought cut down the average to 82 in Arkansas; 76 in Tennessee; 66 in West Virginia, and 59 in Kentucky. North of the Ohio River, Ohio, 80, suffers most severely; Michigan and Wisconsin being less affected by drought, rise above average; Minnesota, on the same parallel, is also above average; while southward Indiana, Illinois, Iowa, and Missouri sink below; the trans-Missouri and Pacific regions stand above. In some parts of Oregon the rains were excessive and injurious. In California the successful growth of alfalfa is noted with an unusually luxuriant pasturage.

MAINE.—*Cumberland* : Some pieces of hay look finely; old fields badly winter-killed.

NEW HAMPSHIRE.—*Hillsborough* : Hay-crop very abundant. *Sullivan* : Good. *Rockingham* : Hay-crop promises largely; two weeks later than last year. *Belknap* : Old grasslands somewhat winter-killed; hay will be average.

VERMONT.—*Lamoille* : Hay-crop in fine condition; stock-raising and dairying the main business of the county. *Franklin* : Grass late, but doing well; pastures good. *Rutland* : Pasture and meadow good. *Grand Isle* : Grass late; timothy thin, but rank. *Chittenden* : Grass heavy on dry land. *Caledonia* : Grass badly winter-killed.

MASSACHUSETTS.—*Berkshire* : Pastures never better; white clover abundant; frequent and heavy rains and rapid drying of the surface. *Plymouth* : Hay-crop large, except on a poor, wet soil.

CONNECTICUT.—*New London* : Grass-crop very good. *Litchfield* : Frequent and heavy showers have lodged the grass and delayed cutting. *Hartford* : Grass much above average.

NEW YORK.—*Columbia* : Pastures better than for years past; rains copious; hay-crop promising. *Steuben* : June dry and cool, retarding grass-crops; clover-crop now being cut; a light crop; timothy still lighter. *Westchester* : June very seasonable; grass looking finely. *Washington* : Grass getting a good growth, but is thin in the meadows; clover largely winter-killed. *Cattaraugus* : Best hay-crop for three years. *Oneida* : Season wet; grass-crops good. *Wyoming* : Pastures uncommonly good; clover somewhat winter-killed, but has latterly done well; timothy rather short and backward. *Wayne* : June rains gave a heavy growth to grass. *Jefferson* : Grass never looked better. *Sullivan* : Pasture abundant; cattle doing finely. *Otsego* : Great growth of grass.

NEW JERSEY.—*Camden* : Hay-crop gathered better than ever before; fine harvest weather; *Warren* : Pasture good; clover and timothy fine. *Burlington* : Severe drought telling on pasture. *Hudson* : Newly-sown timothy looks well; old meadows short and inferior. *Mercer* : Drought damaging timothy and pasture; clover all gathered without a drop of rain or dew; hay looks as green as when it was cut. *Sussex* : Never had such pasture for stock.

PENNSYLVANIA.—*Bucks* : Clover and mixed grasses doing well; timothy suffering for rain. *Perry* : Grass-crops injured by drought. *York* : Fine hay-harvest weather. *Phila-*

delphia : Hay harvested in good condition ; some timothy and clover cut two tons per acre on rather dry ground. *Chester* : Clover harvested in very excellent condition. *Butler* : Grass-crops injured by the wet and cold spring, followed by a hot, dry summer. *Lehigh* : Hay-crop shortened by June drought. *Union* : Shortened by June drought and heat. *Fayette* : Hay light owing to drought in May and June. *Lancaster* : Hay-crop unusually large. *Beaver* : Clover short and cured on the stalk ready for the barn as soon as cut. *Pike* : Grass-crops never better. *Indiana* : Grass-crops superior. *Tioga* : Hot, dry June shortened timothy 10 to 20 per cent. ; clover and pasture less affected. *Crawford* : Best hay-crops for several years in prospect.

MARYLAND.—*Wicomico* : Timothy and clover show most gratifying results. *Harford* : Pasture suffering from drought. *Queen Anne* : Showers have kept pastures fresh and green.

VIRGINIA.—*Fluvanna* : Clover and timothy fair. *Warwick* : Grass suffered from drought. *Pulaski* : Hay-crop light. *Fauquier* : Grass-crop good. *Augusta* : Clover and pasture improved by late rains. *Charles City* : Hay from timothy and orchard-grass, a recent introduction, has been very remunerative on good lands. *Craig* : Injured by drought. *Clarke* : Young clover will probably be killed ; timothy did well when cut early. *Chesterfield* : Clover ; the finest crop yet raised here. *Culpeper* : Good grass-season. *Highland* : Injured by drought. *Madison* : Clover, small ; timothy, fair. *Smyth* : Grasses shortened by drought. *Henrico* : Early pastures and hay-crop good.

NORTH CAROLINA.—*Ashe* : Grass-crops shortened by drought.

GEORGIA.—*Harris* : Pastures fine. *Forsyth* : But little clover sown, but that has done finely.

FLORIDA.—*Jackson* : Injured by late rains.

ALABAMA.—*St. Clair* : Clover good ; timothy injured by May drought.

MISSISSIPPI.—*Wilkinson* : Clover damaged by wind and rains.

TEXAS.—*Austin* : Improved by late showers. *Brazos* : No cultivated pastures. Wild grasses very fine. *Fayette* : Prairie-pasture excellent.

ARKANSAS.—*Fulton* : Prairie-grass fine and abundant, but imperfectly utilized.

TENNESSEE.—*Sumner* : Pastures dried up ; water becoming scarce. *Carter* : Hay-crop much injured by drought. *Hickman* : Pasture fast drying up. Orchard-grass and clover cut June 1 ; yielded well ; timothy and red-top not so well. *Bedford* : Hay, half a crop. *Blount* : Pastures drying up. *Grainger* : Clover and timothy shortened by drought. *Bradley* : Extremely difficult to get a good stand of clover of late years. *Roane* : Grass of every description nearly a failure. *Montgomery* : No clover or timothy fit to cut ; pastures drying up.

WEST VIRGINIA.—*Harrison* : Drought has shortened both meadows and pastures. *Jackson* : Grass-crops greatly shortened by drought. *Monroe* : Pastures and meadows burning up. *Nicholas* : Grass-crops cut down one-half by drought. *Ritchie* : Greatly shortened by severe drought. *Marion* : Pastures fine and cattle fat. *Barbour* : Grass crops injured by drought. *Grant* : Hay almost a failure. *Braxton* : Meadows and pastures short, especially pastures. *Jefferson* : Grasshoppers destroying the young clover. *Mercer* : Grass-crops all below average, through drought. *Monongalia* : About half a crop of hay ; pastures fair ; cattle doing well. *Randolph* : Pastures hardly sufficient for a goose.

KENTUCKY.—*Shelby* : Pastures drying up ; stock-water becoming scarce and springs failing. *Boyle* : Very poor ; hay prospect next to zero. *Adair* : Not a fourth of a hay-crop ; half the meadows will not be mowed. *Hardin* : Pastures dried up. *Laurel* : Meadows and pastures burned up. *Anderson* : Ruined by drought. *Christian* : Hay and pastures dried up. *Hopkins* : Grass-crops almost a total failure. *Lincoln* : Pastures burned up. *Warren* : Drought of nine weeks has cut timothy short. *Carroll* : Timothy shortened by drought of May and June. *Butler* : Pastures dried up and eaten to the ground. *Grant* : Shortened by a terrible drought. *Greaves* : Grass-crops a failure. *Logan* : Pastures dry enough to burn ; stock-water scarce ; families hauling drinking-water a considerable distance ; stock dying of thirst. *Russel* : Pastures dried up ; meadows not worth cutting. *Edmonson* : Meadows and pastures have died out. *Nelson* : Grass-crops burning up. *Gallatin* : Clover and timothy very short.

OHIO.—*Trumbull* : Both timothy and clover abundant. *Vinton* : Meadows will scarce pay for cutting. *Jackson* : Grass-crop short ; pastures drying up. *Coshocton* : Pasture, clover, and timothy seriously injured by drought. *Licking* : Clover and timothy short ; little rain since May. *Perry* : Drought injuring grass-crops. *Montgomery* : Pastures short. *Monroe* : Drought hard on dairies. *Crawford* : Grass-crops light. *Mahoning* : Drought shortened meadows and pastures. *Athens* : Grass-crops not over one-fifth of an average. *Meigs* : Grass-crops light. *Columbiana* : Everything parched.

MICHIGAN.—*Lenaucce* : Clover badly winter-killed on clay soils ; good growing time now. *Saginaw* : New clover and timothy badly injured by spring frosts. *Menominee* : Season favorable. *Wayne* : Grass thin on the ground, but of good quality ; secured in fine condition. *Calhoun* : Grass-crop looks well, though shortened by drought. *Montcalm* : A great hay-crop. *Cass* : Hay nearly all secured in superb order, though a very light crop ; pastures still very short, though cattle do not fall away in flesh very seriously.

INDIANA.—*Elkhart* : Clover and timothy badly injured by two dry seasons. *Madison* : Meadows and pastures short. *Decatur* : Hay and pastures dried up. *Posey* : Pastures good,

but not large enough for the stock on them; clover generally good, but grown in small quantities, *Ripley*: Grass half a crop. *Washington*: Timothy and clover shortened by drought. *Gibson*: Pastures good. *Harrison*: Hay-crop failed; pastures burnt up. *Floyd*: Some meadows not worth cutting; clover better than timothy. *Marion*: Hay-crop shortened by drought; pastures improved by late rains. *Tippecanoe*: Fine grass-crops. *Warren*: Pastures and meadows need rain. *Whitely*: Meadows light, but hay of good quality. *Orange*: Timothy overgrown with white blossom.

ILLINOIS.—*Jersey*: Grass heavy and pastures good. *Kankakee*: Timothy shortened by drought. *Madison*: Timothy good but thin. *Tazewell*: Pastures need rain very much. *Henderson*: Pastures will soon dry up; wells and small streams failing. *Sangamon*: Pastures excellent till within two weeks past. *Grundy*: Grass withering. *Montgomery*: All grasses failed except clover, which grew luxuriantly. *Moultrie*: Timothy injured by drought.

WISCONSIN.—*Crawford*: Timothy suffered from drought earlier in the season. *Waukesha*: Badly winter-killed, but what was left is growing vigorously. *Dodge*: Pastures shortened by drought. *Calumet*: Timothy very good. *Outagamie*: Clover injured by grasshoppers.

MINNESOTA.—*Dodge*: Grass crops recovering somewhat from the previous drought. *Wabashaw*: Shortened by the May drought.

IOWA.—*Henry*: Pastures injured by drought; hay well secured. *Linn*: Grass-crops short; rain greatly needed. *Mahaska*: Too dry; hay very light. *Washington*: Pastures suffering from drought; stock-water scarce. *Lucas*: Injured by drought. *Mitchell*: Grass growing rapidly. *Greene*: Hay short. *Hardin*: Timothy thin and short on account of the dry spring.

MISSOURI.—*Cape Girardeau*: Meadows and pastures suffering from drought. *Sage*: Grass injured by drought in May and June. *Adair*: Timothy shortened by drought.

KANSAS.—*Leavenworth*: Grass-crops, except clover, shortened by drought. *Franklin*: Chinchies going for pastures.

NEBRASKA.—*Adams*: Prairie grass nearly equal to meadow in the older States.

CALIFORNIA.—*San Diego*: More pasture than for five years. *Napa*: Alfalfa a good stand and promising. *Fresno*: Mountain pastures poor.

OREGON.—*Multnomah*: Grass-crops luxuriant from the heavy rains. *Clackamas*: Clover injured by excessive rains. *Columbia*: Pastures never better.

Table showing the condition of the crops, &c., on the 1st day of July, 1874.

States.	CORN.		WHEAT.		RYE.		OATS.	BARLEY.		PASTURE.	CLOVER.	TIMOTHY.	POTATOES (Solomon Tubercum.)		POTATOES (Bataas edulis.) SWEET.	
	Average condition July 1.	Average condition of winter wheat July 1.	Average condition of spring wheat July 1.	Average condition of winter rye July 1.	Average condition of spring rye July 1.	Average condition of winter oats July 1.	Average condition of winter barley July 1.	Average condition of spring barley July 1.	Average condition July 1.	Average condition July 1.	Average condition July 1.	Average condition July 1.	Average condition of last year.	Average condition of last year.	Average condition of last year.	Average condition July 1.
Maine.....	92	85	96	102	95	102	100	100	104	88	93	95	103	99	98	103
New Hampshire.....	95	92	95	102	101	102	100	99	107	101	101	98	99	101	97	101
Vermont.....	86	85	87	96	101	91	98	100	112	92	104	94	102	104	94	104
Massachusetts.....	103	102	104	107	103	102	101	100	118	109	103	108	113	103	108	108
Rhode Island.....	104	95	103	103	116	105	105	100	117	106	118	110	112	110	110	110
Connecticut.....	100	97	97	98	99	98	103	100	112	102	106	105	105	101	98	101
New York.....	100	98	105	103	103	99	83	89	102	105	108	98	99	99	89	101
Pennsylvania.....	102	100	108	97	100	99	100	96	108	108	100	100	100	100	95	100
Delaware.....	100	95	116	102	100	102	92	100	100	100	100	100	100	100	98	98
Maryland.....	101	104	106	100	100	100	81	100	93	98	90	96	98	91	98	96
Virginia.....	104	95	105	104	104	90	90	100	90	90	87	87	100	98	98	93
North Carolina.....	106	101	106	88	88	83	83	101	93	96	100	97	93	105	100	100
South Carolina.....	115	101	103	101	101	82	81	101	103	100	100	97	101	103	106	106
Georgia.....	102	102	103	101	95	101	82	101	99	98	100	96	101	100	102	102
Florida.....	112	99	99	105	101	100	100	90	101	90	90	86	90	91	102	100
Alabama.....	112	83	103	101	101	100	100	90	97	90	90	86	90	109	97	85
Mississippi.....	110	73	103	101	101	100	100	90	90	90	90	86	90	109	97	85
Louisiana.....	96	106	84	89	89	80	90	91	101	84	86	78	102	109	97	81
Texas.....	119	106	144	93	93	80	90	91	82	84	86	78	102	109	97	81
Arkansas.....	112	83	116	106	106	56	80	99	76	75	70	65	85	89	85	80
Tennessee.....	98	82	118	103	103	62	62	99	66	73	62	59	71	86	80	80
West Virginia.....	89	83	117	101	101	54	54	103	59	60	55	87	50	81	63	63
Kentucky.....	87	81	101	101	101	82	82	99	80	81	71	71	108	91	96	88
Ohio.....	102	99	103	101	95	107	107	100	102	96	98	121	103	98	96	96
Michigan.....	106	102	99	98	98	86	86	95	90	85	84	107	93	98	96	96
Indiana.....	108	109	99	101	97	91	91	87	97	93	93	103	102	102	97	97
Illinois.....	104	105	101	99	92	97	97	95	102	98	97	101	99	101	96	96
Wisconsin.....	101	100	99	93	107	91	91	96	102	93	97	100	100	100	96	96
Minnesota.....	110	94	101	99	103	103	101	96	97	98	92	101	106	101	118	98
Iowa.....	109	101	103	103	98	80	80	103	98	98	92	103	106	100	97	97
Missouri.....	101	100	108	76	76	65	102	100	104	94	97	103	106	106	106	104
Kansas.....	114	102	104	103	104	113	103	103	108	102	101	109	108	119	104	104
Nebraska.....	95	109	100	103	103	103	103	100	104	108	100	100	102	99	101	96
California.....	88	93	103	101	102	102	102	102	115	107	100	97	100	100	97	97
Oregon.....	103	94	103	102	102	102	102	106	115	107	100	97	100	100	97	97

Table showing the condition of the crops, &c.—Continued.

States.	BEANS.		SORGHUM.		SUGAR-CANE, (not sorghum.)		TOBACCO.		COTTON.	WOOL.	APPLES.		PEACHES.	GRAPES.	STRAW- BERRIES.
	Average com- pared with last year.	Average condi- tion July 1.	Average com- pared with last year.	Average condi- tion July 1.	Average com- pared with last year.	Average condi- tion July 1.	Average com- pared with last year.	Average condi- tion July 1.	Average condi- tion July 1.	Amount of wool, (in hundredths), compared with last year.	Average condi- tion July 1.	Average condi- tion July 1.	Average condi- tion July 1.	Average condi- tion July 1.	Product com- pared with last year.
Maine.....	103	87									110			106	73
New Hampshire.....	100	98								94	102		96	98	98
Vermont.....	94	89					89	90		98	103			100	103
Massachusetts.....	100	102					50	100		103	69		96	93	110
Rhode Island.....															
Connecticut.....	106	101					90	110		117	120		115		125
New York.....	102	99					90	91		98	103		88	99	106
New Jersey.....	101	97					79	95		100	105		88	98	105
Pennsylvania.....	95	96								98	95		92	103	93
Delaware.....	100	100								100	60		30	90	80
Maryland.....	101	96					109	73		99	91		61	109	99
Virginia.....	99	93					61	79		99	53		37	96	83
North Carolina.....	96	88					65	79		102	68		60	85	86
South Carolina.....	105	103								88	98		89	97	94
Georgia.....	97	92								91	76		76	83	94
Florida.....							101	93		96			80	121	101
Alabama.....	100	101					103	104		92	85		84	96	85
Mississippi.....	100	86					131	102		99	76		65	94	86
Louisiana.....							120	105		87	76		65	86	79
Texas.....	108	94					104	108		73	83		68	104	102
Arkansas.....	94	93					111	108		102	121		121	107	99
Tennessee.....	98	88					105	94		94	80		88	96	72
West Virginia.....	93	83					31	69		97	77		65	99	77
Kentucky.....	94	63					62	62		91	77		74	96	68
Ohio.....	98	89					26	42		97	90		112	106	82
Michigan.....	101	87					33	69		97	90		110	104	99
Indiana.....	102	100								100	94		110	106	99
Illinois.....	103	100					58	83		93	77		80	101	89
Wisconsin.....	102	97					87	89		106	80		93	100	94
Minnesota.....	103	94					69	83		97	92			98	91
Iowa.....	101	94								110	90			107	85
Missouri.....	99	98					88	93		100	90		110	98	87
Kansas.....	98	99					122	94		102	98		106	110	96
Nebraska.....	109	101								97	105		120	107	81
California.....	99	101								151	122		122	111	97
Oregon.....	100	101								124	93		100	94	102

EXTRACTS FROM CORRESPONDENCE.

ILL-TEMPERED CRITICISM.—*Oglethorpe, Ga.*: In a late number of the New York Financial and Commercial Chronicle are certain comments upon the June report of the Department, which I think deserve some notice in the July report. The Chronicle is, in my opinion, willfully misrepresenting the condition of the growing cotton-crop. Its remarks upon the June report of the Department are in bad temper and worse manners. It comes with bad grace from a paper that in the spring stated that "cold, wet weather was favorable to the development of the young cotton-plant, causing it to take root." This nonsense appeared in the Chronicle, and is a fair sample of its perversions. As you are aware, cold, wet weather is the worst thing for young cotton, causing it to die faster than anything else. If such a paper is to be taken as authority, then the planters themselves are ignorant of their business. This same paper stated that an increased acreage in the Southwestern States might be expected, and at that very time the Mississippi was pouring through half a dozen crevasses.

FARMING IN RICHMOND, N. Y.—Market-gardening and fruit-growing are the principal features of cultivation in this county; mixed husbandry is found to pay better than special crops.

AGRICULTURAL MACHINES.—*Dickenson, Kansas*: A hundred reaping-machines have been sold in this town (Abilene) this season.

IRRIGATED LAND.—*Kern, Cal.*: This county has been grazed more than farmed, though we have about 500,000 acres of good bottom-lands. The delta of the Kern River can be easily irrigated, and will produce a crop of barley or wheat, and one of corn the same season. It will raise from 30 to 60 bushels of barley per acre, and from 20 to 40 of wheat. On 4 crops of Alfalfa 8 tons may be raised; this grass is superior to red clover for feed.

OVERESTIMATED CROPS.—*Stanislaus, Cal.*: The California wheat-crop, as usual, is overestimated this year by 10,000,000 bushels. A comparison of the amount shipped, as gathered from the commercial returns for several years, with the present estimates, will show that my view is correct.

METEOROLOGICAL EXTREMES.—*Crawford, Wis.*: The thermometer showed 100° in the shade, June 24; ranged from 85° to 94° during the four days just previous. *St. Croix, Wis.*: Thermometer 100° in the shade. *Morgan, Ohio*: In June the mercury ranged from 90° to 96° for ten days in the shade; on the 23d it stood for five hours at 98°; on the 25th a terrific wind-storm* from the southeast leveled trees, unroofed houses, blew in the gables of brick dwellings, &c. It was followed by a rain-fall of 1.2 inches within 40 minutes. *Hancock, Ill.*: During the night of June 4, 5.45 inches of rain fell—more than ever fell at one time before. *Madison, N. Y.*: A tornado, June 7, blew down buildings, demolished fences, and destroyed crops; hail-stones as large as hens' eggs. *Salt Lake, Utah*: The rain-fall has exceeded, by 40 per cent. that of any previous season.

LABOR.—*Schenectady, N. Y.*: Help is plenty, and can be procured at a lower price than in former years.

WAYNE, N. C.—This county contains 310,000 acres, or nearly five

hundred square miles. One-third is cleared land, of which one-half is laid to rest every year; about 28,000 acres are this year planted in corn and 20,000 in cotton; the remainder in wheat, rye, potatoes, &c.

NEW FARMS.—*Benton, Minn.*: The stagnation of business has turned attention to opening new farms and improving old ones.

FLAX-CULTURE.—*Stearns, Wis.*: The yield of flax promises to be enormous; it is cultivated for the seed only. *Rock, Wis.*:—About 300 acres of flax sown; condition not promising, owing to late sowing and grasshoppers. *Chippewa, Minn.*: Quite a breadth sown, but does not promise a large yield. *Marshall, Iowa*: About 4,000 acres of flax in this county, and 2,000 to 3,000 in the adjoining counties, from seed furnished mostly by the Hawkeye Oil-Mill Company, of Marshall-town; average yield, from 8 to 10 bushels per acre; price from \$1.25 to \$1.65 per bushel. *Benton, Iowa*: Flax is an important crop here; raised principally for seed; condition full average.

JUTE.—*Leon, Fla.*: The jute I planted as an experiment came up well, and has grown finely. It was planted as cotton and with cotton April 1 and 30, and has since been cultivated as cotton. The stalks are now from 3 to 6 feet high, and very thrifty.

DECREASE OF LIVE-STOCK.—*Medina, Ohio*: The diminution of stock in this county is alarming; horses are 323 less than last year; cattle, 4,480; sheep, 8,843. But once in fifteen years have we had so few—in 1865. The decrease this year is owing to the diminution of the hay and corn crop. The wool-clip is 30,000 pounds less than last year, but the fleeces average heavier.

HOPS.—*Sauk, Wis.*: A larger crop than at any time since the panic of 1868; acreage increased, 20 per cent.; new yards, 25 per cent. above average; old yards, 10 per cent. below.

CASTOR-BEANS.—*Franklin, Kans.*: Castor-beans are becoming an important crop; last year they were profitable. *Wilson, Kans.*: Castor-beans and flax taking the place of small grain till the chinchies disappear.

ONIONS.—*Dorchester, Md.*: The onion is fast becoming a standard crop; the soil and climate present admirable conditions of growth for this vegetable.

WATERMELONS.—*Wicomico, Md.*: This crop yields from \$30,000 to \$40,000 in this county.

NEWSPAPER CROP-REPORTS.—*Barnwell, S. C.*: The newspapers are publishing the replies of their correspondents as to condition, &c., of growing crops. These are generally local, and cannot be expected to apply to the whole country. There will be the earliest "open cotton" in this county this year ever known, from plants that escaped the frost of May 1. Were the whole crop like these favored spots, there would be the most advanced and promising fields ever seen on the 1st of July.

ROYAL AGRICULTURAL MUSEUM AT BERLIN.

The agricultural museum of the United States Department of Agriculture has, until recently, been unique in its character. But the value and utility of such an institution are so evident that a number of attempts are now being made, both in this country and Europe, to establish collections of a similar character. Among these, that commenced at Berlin, Prussia, appears likely to assume a prominent place. Occasional notices of it have appeared in the "Annalen der Landwirtschaft," and we have recently received its catalogue and a guide to the museum, which enables us to give the following description:

The Royal Agricultural Museum was established by Minister of Agriculture von Selchow, at the instance of the royal agricultural commission, and was opened on the 4th of April, 1868, in temporary quarters, No. 24 Potsdamer strasse. Its object, as stated in the introduction to its catalogue, is to benefit agriculture "by exhibiting the best examples of every kind of product," and "by giving valuable information of all kinds."

To accomplish the first object, seeds, grains, fruits, and samples of every kind of agricultural production are exhibited; while to attain the second end, the library, models, or actual machines, and illustrations of all the different tools and processes employed in agriculture are provided. The collection occupies two stories of an irregular building, divided into seventeen apartments, of which the first contains specimens of wood, native and foreign, including very fine collections from Canada and Hindostan. The heating power of different kinds of wood is shown by Winkler's tables, as follows: Taking a cubic meter of common spruce as unity, to give the same amount of heat will require .94 white pine, .92 poplar, .91 willow, .70 beech, .69 Norway spruce, .66 birch, .65 maple, .63 elm, .59 oak. Near this collection are the seeds of the different trees, and charts showing the extent of forests in Prussia and their product. Also, here is a stem of *Lonicera periclymenum* cut so as to show that it is the descending sap-current which forms the wood.

Next, in three rooms, is the collection of wools, grouped under six heads, viz: First. Pelts, mostly of Russian breeds. Second. Commercial samples. Third. According to fabrics made from them. Fourth. General collection arranged by countries. Fifth. Showing improvement of staple. Sixth. Special German collection as it was arranged for the Paris Exposition, 1867. Of these, in the third division, the preparation of combing-wools is shown, from which ladies' cloth, thibet, lasting, &c., are made; then the short and curly, or merino wools, capable of felting and making close cloth; and, third, the wool from rags and waste, known as mungo and shoddy. The first is made from all-wool rags; and the second from mixed stuffs, from which the cotton is removed by treatment with acids. Near by are specimens of different kinds of yarn, and cloth in all its stages of manufacture.

In the machine-halls is a collection of East-Indian drills sent by the British government of Bombay. Some of these represent machines that have been in use thousands of years, and which undoubtedly gave us the first notions of drill-culture. A statement is made that the earliest European drill was invented between 1638 and 1653, by Gabriel Platte, an Englishman, and was arranged to plant in hills, but in a straight line. The invention is also ascribed to Joseph Locatelli, a nobleman of Carinthia, and to an Italian, Cavallina. Locatelli's "seed-ing-plow" went to Spain, and from thence to England in 1669, but

Jethro Tull, by the invention of the three-shared drill in 1733, first brought drill-culture into prominent notice, and after him James Cooke, a minister of Heaton-Norris, in Lancashire, made, in 1783, a six-toothed drill with cups for distributing the seed, which must be considered as the parent of those now in use. Another Englishman, Duckett, advocated the cylinder-sower already used by Tull, and introduced into Germany by Von Thaer, chiefly however for broadcast-sowers. The first broadcast-machine was made by Slight, of Edinburgh, in 1817, but was soon supplanted by the drill. The first box-drill for small round seeds, as rape, mustard, &c., was made by an English captain, T. Williamson, 1809.

The oldest moving-machines, though very rude, were used by the Gauls. A cart, having blades arranged in front, was pushed forward into the grain by oxen hitched behind, and thus cut off the heads.

A system of six rotating scythes was made by Joseph Boyce in 1799, and an attempt to use the same principle was made by Gompertz and Mason, in 1852. In 1811-1815, Smith, of Deanstone, brought out a machine in which a short vertical revolving cylinder carried a knife on its lower end, but all these rotating machines have proved impracticable. Robert Meares, in Frome in Somersetshire, established in 1800 the shear principle as the only practical one. Salmon, in Woburn in 1807, built a machine with a row of blades and fingers moving over them, and also applied the reel. The Scotch parson, Patrick Bell, of Torfarshire, in 1826, and William Manning, of Plainfield, New Jersey, in 1832, were the founders of the present style of machines. Manning was the first to attach the draught at the side of the machine, all others previously having been pushed from behind. Obed Hussey, of Cincinnati, attached the side platform and slit finger. McCormick, then of Rockbridge, Va., now of Chicago, in 1834 improved the Manning and Hussey machine, and the appearance of these at the London Exposition, in 1851, was the signal for their introduction into general use.

The oldest thrashing machine (except the antiques) was made by Michael Menzies, in 1732, or perhaps at the same time by Tull, consisting of a rotating cylinder with flails. Several others followed shortly, some like a flour-mill, and in 1792, Willoughby, of Bedford, made one like that of Menzies, which Von Thaer brought to Germany, and which served as a model for the Mecklenburg thrasher. The machine of James Wardropp, of Amptzell, in Virginia, is on a similar principle, only the beaters are sticks moving up and down. Finally in 1785, Andrew Meikle, of Tynningham, East Lothian, laid the foundation of the present form, by using a drum with four beaters parallel to its axis, that carried the grain between itself and a concave, furnished with similar rods. An American, named Moffitt, in 1854, substituted spikes for the rods, though the Meikle machine adheres to the old system.

Next is flax machinery from various countries. There is also a working model of the different kinds of apparatus used to distribute the grain from hoppers of seed-drills, viz: a small roller with cavities sunk in it; the bucket-wheel system, where a wheel with little buckets is used; the cup system, in which cups are substituted for buckets; the brush system in several forms, and others. On the wall hangs a small Italian drill, and Cahoon's centrifugal broadcast sower from North America.

In the adjoining hall are several mowing-machines and lawn-mowers. These last are made on the plan of cloth-shearing machines. Also machines for grinding the knives; and in a niche are models of two of the French wagons used for transporting trees with frozen balls of earth.

There are food steamers, brewing apparatus, and hanging on the wall various kinds of harrows, among which the old Russian form, made of the branches of trees, is not wanting. Near by are models of elevated railways, copies of some in actual use, also cutting machines, and models of laborers' houses, root-cellar, &c.

The various systems for the improvement of swamps, reclamation of meadows, utilization of sewerage, &c., are also shown by appropriate models, including the celebrated Petersen system of drainage, and various machines for irrigation, some of which are from the East Indies, made of leather sacks on the spokes of the wheel, turned by man or bullock power. There are five models of various kinds of timber-rafts, and appliances for rafting timber down small streams.

Hall No. 7 is filled with plows of home manufacture and imported. Most of the foreign ones come from those celebrated makers, Ransome Sons, of England, and are adapted for turning the smooth furrows the Englishman loves so well. They are distinguished by long, twisted, narrow mold-boards, and narrow shares, long beams and handles, and high prices. The American plows are mostly without carriages, and are particularly noticeable for the excellence of their material. The beams and handles are of tough wood, and the share and board of so-called German steel, by which is meant not steel made in Germany, but a particular quality nearly approaching cast-steel. The first American who made a cast-iron plow was Charles Newbold, of Burlington, N. J., in 1797, who cast share and board in one piece, a plan soon superseded by Jethro Wood, who made them in two parts, and in 1819 gave them the well-known form they now bear. The American mold-boards take a medium curve between the English form and the short, stumpy plow seen in many parts of Germany. They break the ground less than this last, and are better adapted for clayey soil. Near the American collection is a plow from Mieuxmoron, of Dombasle, of Nancy, France, whose factory claims to be more than a century old. It is strongly built, like all French plows, and is evidently an improvement of the old Flandrian form. There is a large number of German plows, among which one for beet-root culture is made to run 14 inches deep. In three glass cases are 187 models, showing the complete history of plow manufacture from the earliest date to the present time, and not far off are eight cases of models of hand-tools of all nations to the present time.

In corridor No. 8 are models of milk cellars and milk apparatus of all sorts, tall vessels and flat pans, cooling and butter tubs, and cheese-presses, &c., as well as lactometers and other scientific apparatus for determining the value of milk.

Further on are shown tools for wine-making, including a small Pasteur's heater, and a collection of grape-stocks to illustrate methods of training.

The hall for seeds and grains is the finest in the museum. The samples are all arranged scientifically according to Eudlicher's system, and, so far as possible, pictures of the living plants are also at hand; the various continents are denoted by the color of the label, as Europe, white; Asia, yellow; Africa, blue; America, green; Australia, red. Case No. 5 contains a "Summary of substances used for food," and may be considered as exhibiting an abstract of the whole collection. The upper shelf contains garden-seeds and foreign spices; the next, the more important grasses and fodder plants; the third, fourth, and fifth, the grains used for human food. Besides the ordinary bread corn, we find here the doura of the Arabs and Negroes, the eleusine of the Abyssinians, the quinoa of the Peruvians, the sand halm of the Icelanders, &c.

Then there is the knackbread in flat, round cakes, the common rye bread of Sweden; the want bread (noth brot) of Lapland, with the ground reindeers' flesh, birch-bark, rye-straw, and barley-meal, from which it is made. Also, the brandy distilled from reindeers' flesh—no unimportant item of industry—is not wanting. Besides the narcotics, as coffee, tea, &c., there is a glass containing a kilogram of wheat, and near it similar glasses containing the starch, albumen, water, &c., the constituents of a similar quantity of wheat.

This system of illustration is carried out with potatoes and other foods, and their comparative value for nutrition is thus very forcibly shown, a kilogram of potatoes, for example, containing 200 grains starch, and 750 grains or two-thirds its weight of water, and on another shelf we see the elements of straw compared with those of their proper grains.

Another case shows the various processes of starch-making, the gluten being also utilized in the preparation of macaroni, &c., being added to the flour from Northern Europe, that is found very deficient in gluten as compared with that grown in South Europe. All the varieties of starch known in commerce are shown, and we observe that most of the Sago starch of commerce is potato-starch, colored with burnt sugar or iron.

Finally we have models of all parts of the flowers of cultivated plants, models of barns and farmsteads, an excellent collection of fruits, the herbarium, the cases of sugar and its manufacture, of flax in its different forms and stages, paintings of cryptogamic plants, horseshoes and methods of shoeing, bees and bee-hives, and all the miscellaneous articles necessary to complete the representation of agricultural industry here presented.

It is not intended to limit the influence of the museum to the mere exhibition of its contents to visitors, but lectures are to be given, illustrated by its collections, which the students of the agricultural college are expected to attend. Three days each week the museum is open to the public, free, and special permission for study may be obtained by students, on application. At the close of its first year the museum comprised 17,000 specimens; it now possesses 27,000; most of which have been obtained by donation. When a permanent building shall be erected, it is the intention to have workshops included, suitable for the preparation of models, &c., for which there is great need. The attention of the curator has hitherto been directed to arranging and classifying the collection, with a view to ascertaining its deficiencies, that they may receive especial attention, and it is proposed that the history of improvement in the various utensils and processes shall be as completely illustrated as possible.

ENTOMOLOGICAL RECORD.

BY TOWNEND GLOVER, ENTOMOLOGIST.

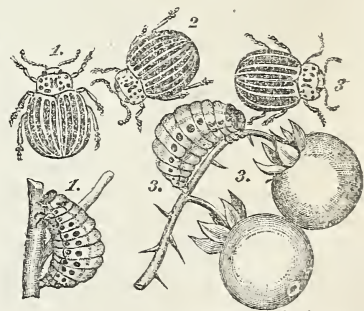
THE COLORADO POTATO-BEETLE.—As this insect is now so troublesome in the eastern section of the country, and many correspondents, whose farms are attacked for the first time, are asking for information as to the best means for preventing their ravages, we deem it necessary to republish what has been said in former reports regarding their natural history and habits, with the additions of the latest facts on the sub-

ject that have come under our observation. This insect has been known for over fifty years, and has been particularly injurious to the cultivated potato since about the year 1860, when it commenced its travels eastward from the base of the Rocky Mountains, and has been steadily progressing since at the rate of sixty to eighty miles a year. It is now reported as very destructive in Central New York, Pennsylvania, and New Jersey, Maryland, District of Columbia, and Eastern Virginia. It is known as the Colorado or Western Potato-B Beetle, or ten-lined spearman, (*Doryphora decem-lineata*,) and its habits are as follows: The eggs are deposited by the female, to the number of about seven to twelve hundred, at intervals, during forty days, on the leaves of the potato, in somewhat regularly-arranged loose clusters. In about six days they hatch into larvæ, and feed upon the foliage of the plant from seventeen to twenty days; they then descend into the ground, and after remaining in the pupa state, to which the larva changes, for ten or twelve days, they again make their appearance as perfect beetles. In about a week the sexes pair, and in another week the females begin to lay their eggs for a second brood, thus requiring but fifty days from egg to egg again. To give some idea of their powers of reproduction the Canadian Entomologist states, that if the progeny of a single pair were allowed to increase without molestation for one season, the result would amount to over sixty millions. The insects do not die immediately after laying their eggs, as Professor Daniels, of the Wisconsin University, once kept a female alive six weeks without food, after she had laid twelve hundred eggs.

There is another insect, belonging to the same genus, which is often mistaken for the Colorado beetle. It is, however, easily distinguished from the genuine, as the second and third stripes are always united behind, giving the appearance of a heavy black stripe; and the edges of all the stripes have but a single row of punctures; the legs also have a black spot in the middle of the thighs. This insect has also been found feeding upon the horse-nettle, (*Solanum carolinense*,) in South Carolina, and has been taken upon potatoes and egg-plants in Alabama, and was particularly injurious to the latter.

In the accompanying wood-cut, Fig. 1 represents the true potato-beetle, *Doryphora decem-lineata*; Fig. 3, the *Doryphora juncta*; and Fig. 2 is an apparent cross between the two, or a variety once found in the South, in which the heavy, thick black line of the *juncta* has a very fine yellowish line running partly through it longitudinally.

The Colorado beetle has a great many foes or parasitic insect enemies that do much toward lessening their numbers and preventing still greater destruction in our potato-fields. It is attacked among the beetles by *Hippodamia maculata*, *H. convergens*, *H. quindecim punctata*, *Coccinella munda* and *C. novemnotata*, *Tetracha virginica*, *Calosoma callidum*, *Harpalus caliginosus*, *Pasymachus elongatus*, and *Lebia grandis*; among the plant bugs by *Arma spinosa* *A. grandis*, *Harpactor cinctus*, *Euschistes punctipes*, and *Stiretrus fimbriatus*. The larva of a parasitic fly, *Tachina doryphoræ*, lives in the larva of the beetle, and the *Polistes rubiginosus* carries it to its nest as food for its young. *Epicauta pennsylvanica* and *Macrobasis fabricii*, both beetles that feed upon the potato, also devour this beetle.



The best remedy that can be recommended is pure Paris-green, mixed with ashes or flour, in the proportion of 1 part to 12 or 15. It should be dusted over the plants in the morning when the dew is on the foliage, and should always be repeated after rains. A convenient way of dusting the vines evenly is to prepare a dredge, on a large scale, from an old fruit-can, by puncturing the bottom full of small holes, and securing to the side a piece of broom-handle about two feet in length. This, when filled, the operator can carry in one hand as he walks down the rows, gently tapping the handle with a similar stick held in the other hand, being careful always to keep to windward. The amount can be regulated by the speed of the operator. Three pounds of Paris-green to about forty pounds of flour, ashes, or air-slacked lime, will answer for an acre of potatoes.

One of our correspondents writes that he has applied Paris-green, mixed with water, sprinkled over the plants with good effect at the rate of 1 pound to about 48 gallons, and seems to think it the best plan, as the dust then cannot be hurtful to the operator.

Mr. Saunders, of this Department, has tried brushing them off of the vines in the heat of day, and thinks that most of them were destroyed by the operation, and recommends it as the easiest way to get rid of them. We think, however, this remedy would prove of little value in localities where the heat of the sun is not as great as here. Some persons, having a prejudice against the use of Paris-green, recommend hand-picking, or collecting the insects in nets of gauze, and though this may answer in the early part of the season, and do much good by lessening the numbers of the second brood, still it is not practicable or sure later in the season when the insects are very abundant. Insects caught in this manner should never be crushed by the fingers, as they are quite poisonous. Deaths have also resulted from breathing the steam from hot water that has been used to kill them, and also from carelessly partaking of food without washing the hands after handling these insects. As the Paris-green is also poison, composed largely of arsenic, great care should be exercised in its use.

As much of the Paris-green that is sold for the purpose of destroying the potato-beetle is impure, and in many instances not Paris-green at all, but chrome-green or imperial green, we give the following test for its purity from one of the Baltimore manufacturers, as follows: Place a small portion of the green in a test-tube, adding a small quantity of water and caustic potash, which will take up all the arsenic, throwing down the oxide of copper; wash this with a little water to free it from the arsenite of potash; then add nitric acid and water, which will dissolve the copper, leaving the adulteration, if any.

INSECT INJURIES.—Our statistical correspondents reveal an appalling visitation of insect scourges in the Northwest. The most injurious pests are of types unfortunately too well known by the American farmer. Several species unrecognizable from description are mentioned, and in a few cases correspondents have attempted to describe them. In a majority of cases, however, a person not versed in entomology will fail to detect the specific points of difference, and will consequently send a description that will suit several other forms of insect life as well as the one under consideration. A single specimen will enable the entomologist to identify the injurious insect, and to suggest such methods for its extirpation as the resources of entomological science will admit. The intelligent gentlemen who give gratuitously so much time and thought to the collection and transmission of the latest statistical facts will see at once the importance of prompt and accurate information in regard to

insect depredations. By securing specimens and transmitting them to the Department they will not only give facilities for the enlargement of entomological science, but also will confer a lasting benefit upon the farming interest, which they have so much at heart.

The following is a brief general statement from the county reports of July, 1874, showing the character of the various destructive insects, and something of the extent of their depredations.

Chinch-bugs, (*Micropus* [*Rhyparochromus*] *leucopterus*).—This insect, intensifying its mischievous presence in the West, is extending its ravages eastward. Last year it was heard of in only one county east of the Alleghany Mountains—Halifax, Virginia. This year it has again been quite destructive in spring-grain in this county, as well as in Nelson, Southampton, Pittsylvania, Albemarle, and Campbell; it was also mischievous in Caswell, North Carolina, in Jefferson, West Virginia, and in Livingston, Henry, and Graves, Kentucky; it is reported in Athens, Ohio. In Indiana it was mentioned in several counties as more or less injurious, viz: Pike, Crawford, Putnam, Shelby, Washington, Brown, Crawford, Jasper, Morgan, and Orange. Its ravages were more severe and wide-spread in Illinois. In some counties they appeared early enough to attack winter-wheat before harvest, and to make the wheat-stubble a point of attack upon the various spring crops. The counties complaining of their presence were Pike, Logan, Cumberland, Hancock, Macon, Marion, Pope, Mason, McHenry, Cass, Clinton, Crawford, Effingham, Jersey, Macoupin, Montgomery, Moultrie, Morgan, Richland, Vermillion, Washington, Wayne, Piatt, Perry, Schuyler, White, and Sinclair. The drought favored their operations as far north as Wisconsin. Three southern counties, Richland, Jefferson, and Green, report them as threatening spring crops. In Clarke, Iowa, timely rains largely destroyed the young insects, thus saving the crops from their ravages. They were quite injurious in Jefferson and less so in Taylor. Their most fatal ravages, however, were felt in Missouri; in Pettis they were so numerous on many farms as to swarm into houses and barns like bees; near wheat-fields the ground was a mass of crawling bugs from noon till near sundown. In Moniteau and Benton they seriously injured wheat, only on light prairie soils; wheat on timber-land measurably escaped. In Polk, corn-fields adjacent to wheat-fields seem to have specially suffered; they were particularly destructive upon grain and grass crops. They are also reported in Lawrence, Caldwell, Cass, Vernon, Saint Clair, Green, Boone, Moniteau, Barry, Barton, Carroll, Cape Girardeau, Christian, Clinton, DeKalb, Harrison, Johnson, Linn, Montgomery, Miller, Phelps, Polk, Ralls, Stone, Randolph, Reynolds, Hickory, Newton, Adair, Franklin, Dallas, Morgan, Laclede, McDonald, Crawford, Clay, Washington, and Jasper. Kansas reports greater or less injuries in Douglas, Woodson, Allen, Anderson, Barton, Bourbon, Chase, Cherokee, Franklin, Jackson, Lyon, Linn, Montgomery, Miami, Morris, Sumner, Greenwood, Marion, Osage, Wabaunsee, Wilson, Atchison, and Neosho. In Franklin, a corn-field within twenty rods of a wheat-field was considered as doomed. No efforts to resist the ravages are reported, nor does any expedient appear to have been suggested in any portion of the country for relief against this very serious and destructive enemy.

Colorado beetles, (*Doryphora decem-lineata*).—Colorado beetles are working eastward. They were quite severe in Wayne, New York, but were comparatively harmless in Wyoming. In Alleghany they were strenuously resisted with Paris-green; they were also noted in Cattaraugus, Delaware, Madison, and Tioga. They were also operating in Bar-

lington, New Jersey. In Butler, Pennsylvania, Paris-green is pronounced a failure; resort was here had to patent preparations, but the most effective method of resistance was to shake the bugs into a box and dispatch them. In Union Paris-green and lime were also effective. In Adams and several other counties the virtues of Paris-green were utilized by a persistent and intelligent application. In Dauphin and Forest the insects appeared to be departing, leaving no great damage behind them, especially upon late plantings. They were more or less mischievous in Armstrong, Franklin, Lycoming, Huntingdon, Chester, Philadelphia, York, Perry, Clearfield, Northampton, Washington, Indiana, Lancaster, Beaver, Elk, McKean, Luzerne, and Cameron. Maryland notes their presence in Alleghany, Frederick, Baltimore, Carroll, Prince George, Hartford, and Cecil. They were also in Culpeper, Highland, Fauquier, and Prince William, Virginia; in Harrison, Brooke, Cabell, Hardy, Hancock, Jefferson, Pendleton, and Randolph, West Virginia. In the last-named county the beetles were destroyed by an insect called the soldier-bug, of which a specimen would be very acceptable. They injured crops in Lawrence and Bradley, Tennessee, and in Rockcastle, Shelby, Jefferson, Carroll, Harrison, Taylor, Anderson, Lincoln, Grant, Scott, and Spencer, Kentucky. In Ohio they appear to have been less destructive, and more amenable to remedies, especially Paris-green. They are here reported in Trumbull, Delaware, Erie, Lucas, Athens, Licking, Meigs, Champaign, Noble, and Columbiana. They are noted in Branch, Monroe, Lenawee, Antrim, Bay, Van Buren, and Menomonee, Michigan, but appear to have been more threatening and troublesome than seriously injurious. In Cass, Indiana, they are becoming perceptibly less numerous under the influence of some insect enemy destroying them. They were also declining in Tippecanoe; they were destroyed by the persistent use of Paris-green in Marion. They are noted in Elkhart, Clay, Jasper, Harrison, Orange, Marshall, Jennings, Putnam, Wabash, and Perry. Parasites of some kind destroyed most of their eggs in Putnam, Illinois; they were also more or less destructive in Cumberland, Hancock, Kankakee, Ogle, Whiteside, Rock Island, Morgan, Marion, Ford, Grundy, Caswell, Macon, Madison, Tazewell, Carroll, Wayne, and Schuyler. A discreet and energetic use of remedies saved the crops in several counties, and limited the injuries in others. In several counties of Wisconsin they were numerous, but here, also, the value of efforts to resist the ravages of the beetle were illustrated by excellent results. The insects are noted in Pierce, Greene, Iowa, Dodge, Fond du Lac, Walworth, Clark, Columbia, Douglas, Green, Lake, Door, and Outagamie. West of the Mississippi River they were less mischievous. Minnesota reports them in four counties: Ramsey, Chisago, Steele, and Meeker; Iowa in six: Cass, Howard, Clinton, Lamar, Pottawatomie, and Louisa; Missouri in three: Nodaway, Phelps, and Reynolds. Kansas in three: Woodson, Greenwood, and Mitchell. Nebraska in two: Antelope and Thayer. In Mitchell, Kansas, the eggs were destroyed by an insect which, from the description, was probably the lady-bug, (*Coccinella*.) In Shelby County, Kentucky, a novel expedient is reported as successful; fields infested with beetles were plowed up and paddled to destroy the insects with their eggs. In Nodaway, Missouri, the insects were destroyed by a parasite resembling a pumpkin-fly.

Grasshoppers. One species (*Caloptenus femur-rubrum*) was somewhat demonstrative in the East; Delaware and Jefferson Counties, New York, note their presence, but with slight damage, and declining numbers. In Jefferson, West Virginia, they were destructive on young clover; in Fairfield, Ohio, their operations were merely local; they are also men-

tioned in Livingston, Kentucky. Another species (*C. spretus*) has wrought terrible havoc in many counties of the Northwest. Our correspondence last year forewarned us of a destructive visitation of this pest from the immense number of eggs deposited during the close of the last season. The severe winter, it was hoped, had mostly destroyed these eggs, but still countless millions survived in some counties, and now threaten to destroy every growing crop. Many farmers refused to put in crops in the presence of this expected nuisance. In Wisconsin, they were destructive in Brown, Clark, Door, and Outagamie. Minnesota, however, has received the most terrible visitation. In Jackson, while yet too young to fly, the insects destroy all the grain-crops and gardens. Here they rise in the air during the daytime, and settle upon the crops at night. Their movements are very erratic; they suddenly disappear, and as suddenly return. In Faribault, they began to wing about June 20, and in two or three days to fly; they always move with the wind, and not over five or eight miles per day. In Cottonwood, they have swept 95 per cent. of the grain and vegetable crops; thousands of acres of wheat are perfectly bare. They were first noted here about June 12, 1873, when they remained about two months, laying their eggs and destroying the crops generally; they began to hatch in April, 1874, and began to fly about June 20; every day the air is full of their swarming myriads, but myriads still remain. In Renville, river farms are entirely stripped of wheat; though winging fast, they seem to recruit full as many as they send away. In Martin, the crops are totally destroyed; it is stated that people must here have help or they must emigrate. They are also very bad in Lyon, Watonwan, and Rock. In Iowa they ruined the wheat-crop of Harrison as well as the corn, and the young apple-trees; in Buena Vista they had just commenced flying, and were seriously threatening the crops; in Carroll a few exhausted pioneers of the main army had fallen, but had not done any damage; they had left Cherokee after doing some injury; they were also noted in Tama, Lyons, Sioux, Hancock, Pocahontas, Emmett, Humboldt, and Webster. Within comparatively narrow range this scourge appears to have been terribly severe.

Tent-caterpillars, (Clisio campa.) This insect was very severe on fruit-trees in Franklin, Maine. In Somerset it destroyed 1,000 acres of poplar-trees. In Hartford, Connecticut, it depleted the apple-crop 10 per cent.; it was also destructive in Tallahatchee, Mississippi.

Canker-worms, (Anisopteryx vernata,) have infested a few orchards in Plymouth, Massachusetts.

Apple-worms, (Carpocapsa, pomonella.) These insects are reported in Monroe, West Virginia; Ionia and Antrim, Michigan; Hamilton and Perry, Indiana; Hancock, Illinois; Jefferson, Iowa; Daviess, Missouri; and Salt Lake, Utah.

Curculio, (Conotrachelus nenuphar.) Reported in Grainger, Tennessee; Crawford, Ohio; and Antrim, Michigan.

Rosebugs, (Macrodactylus subspinosus.) Injured cultivated grapes in Washington, Kansas. After they left, a cottony substance appeared under the leaves, from which proceeded a larva that in some cases stripped the vine bare of fruit and leaves. An unknown worm destroyed the grape-vines of Salt Lake, Utah. Various fruit-insects were destructive in Franklin, Kentucky, Nodaway and Moniteau, Missouri. The plums were devoured by unknown insects in Marion, Iowa.

Cut-worms, (Agrotis, sp.) In Saint Mary's, Maryland; Green, North Carolina; Wayne, Georgia; Tunica, Mississippi; Tensas, Louisiana; Arkansas, Arkansas; Bay and Saginaw, Michigan; Dodge and Green Lake, Wisconsin; San Pete, Iron, and Utah, Utah.

Measuring-worms. Injured fruit and forest trees in Highland, Ohio.

Boll-worms, (*Heliothis armigera*.) Attacked cotton squares in Crittenden, Arkansas; they were not numerous.

Cotton caterpillars, (*Anomis xylinæ*.) Are very dubiously reported in Muscogee, Georgia; a germ of this insect was seen in Rapides, Louisiana, June 15. Cotton-flies, probably the perfected insect, appeared in great numbers in one field in Marion, Mississippi. Cotton-lice (*Aphides*) were seen in Troup, Georgia.

Hessian-flies, (*Cecidomyia destructor*.) Baltimore, Maryland, and Lawrence, Missouri.

Wheat-midge, (*Diplosis tritici*.) Tazewell, Virginia, and Bracken and Anderson, Kentucky.

Bud-worms. Gloucester, Virginia; Moore, North Carolina; Clarendon, South Carolina; and Conecuh, Alabama.

Tobacco-worms, (*Macrosila Carolina* and *M. quinquemaculata*.) Caswell, North Carolina; Cabell, West Virginia; Adair, Bracken, Grant, Edmonson, and Trimble, Kentucky; Vinton, Ohio. They also attacked potatoes in Antelope, Nebraska, and Barton, Kansas.

Miscellaneous.—A slender, slate-colored bug, probably a species of *Cantharis*, attacked potatoes in Greenwood, Kansas. Undescribed insects troubled the corn in Hillsborough, New Hampshire; Pitt, North Carolina; Wayne, Georgia; Harrison, Mississippi; Des Moines, Iowa. In Caroline, Maryland, innumerable green lice (*Aphis avenæ*) sucked the milk of the wheat-grains in the milky stage. Baltimore County was visited with a variety of insects troublesome to the horticulturist. In Dauphin, Pennsylvania, an undescribed insect ate the inside of the wheat-grains, leaving only the hull, which fell to the ground. Buffalo-gnats (*Simulidæ*) troubled domestic animals very seriously in Powhatan, Virginia. The grass army-worm (*Leucania unipuncta*) appeared in Knox, Tennessee. In Crawford, Indiana, a yellow bug, laying a bunch of yellow eggs on the leaves, injured early potatoes.

Our correspondent in Poweshiek, Iowa, says that Paris-green, applied in the same way as to destroy Colorado beetles, will destroy the eight-spotted forester, (*Alyphia octomaculata*), so destructive to the grape-vines of the West. This remedy, however, is somewhat dangerous; it may poison the fruit. The effects of wholesale destruction of birds is now seen in the devastation of insects in different sections.

BOTANICAL NOTES.

BY DR. GEO. VASEY, BOTANIST.

POISONOUS PLANTS—LOCO AND RATTLE-WEED.—In the monthly report for October, 1873, we gave some account of a poisonous plant, called loco, which grows in California, and is sometimes destructive to sheep and cattle which feed upon it. We there stated that the plant was a species of *Astragalus*. We have recently received specimens from Mrs. J. S. Whipple, of San Luis Obispo County, of what is called loco, and also of a similar plant called rattle-weed. They are both species of *Astragalus*, but the leaves and flowers are so much broken up that the particular species cannot be accurately determined. They have smooth, inflated pods, that called rattle-weed being about an inch and a half long, thin and bladder-like. Mrs. Whipple writes:

The description of the loco-plant given in the Monthly Report was correct. It grows in abundance in several counties in Lower California, and appears to be a natural production

of the localities where found. It occurs on high and low, wet and dry lands. Animals are not fond of it at first, or don't seem to be, but, after they get accustomed to the taste, they are crazy for it, and will eat little or nothing else when the loco can be had. There seems to be little or no nutriment in it, as the animal invariably loses flesh and spirit. Even after eating of it they may live for years, if kept entirely out of its reach, but if not they almost invariably eat of it until they die. I sent to Bakersfield for the specimen of loco, as it does not grow just here. The rattle-weed, of which I send a sample, seems to be a kindred plant and of the same nature, producing nearly the same effect. It grows in this locality in abundance. This also flourishes on the mountains and in the valleys, on wet or dry land, but is confined to certain counties, or is not found in all parts of the State. If eaten freely of at first, the animals sometimes die in three days, but sometimes live two or three weeks, and, as with the loco, if but little is eaten, and the animals are kept from it, they may possibly get over its effects.

I also send you a sample of milk-weed, which grows in abundance here. Old settlers say that it is very poisonous to sheep, and when eaten produces death within two or three hours, the sheep bloating very rapidly until it dies.

The specimen sent as milk-weed does not appear to be of the *Asclepias* family, but is too young to be satisfactorily determined. It appears, however, to be one of the *Compositæ*, probably a species of *Stephanomeria*, somewhat similar to our wild lettuce (*Lactuca*.)

Subsequently to the reception of the specimens above named, the Department made application to another correspondent in Bakersfield, California, who has sent us well-prepared specimens of what is called loco and also of the rattle-weed. These specimens were submitted to Dr. Gray, who decides the former to be *Astragalus Hornii*, Gr., and the latter to be *Astragalus lentiginosus*, var. *Fremontii*. This correspondent has had practical experience with these plants, having lost by their poisonous effects a large number of horses and other stock. He entirely confirms the account of symptoms and effects previously given.

FACTS FROM OFFICIAL SOURCES.

WHISKY FROM MOSS.—The Department of State has forwarded to this Department a communication from Mr. C. C. Andrews, representative of the United States at Stockholm, respecting the production of whisky, in Sweden, from lichen or reindeer moss. The manufacture was begun in 1863, by a process invented by a Swedish chemist, Professor Stenberg. For six years the quantities of moss used, and of whisky—50 per cent. alcohol—produced, were as follows:

Year.	Moss, pounds.	Whisky, imperial gallons.	Year.	Moss, pounds.	Whisky, imperial gallons.
1868	3,315,928	163,008	1871	1,720,141	84,672
1869	6,001,470	294,912	1872	2,149,051	105,408
1870	3,565,384	175,104	1873	704,793	34,560

Mr. Andrews states that the falling off in production is owing partly to the abundance of other materials for whisky, such as potatoes and grain, and partly to the increasing difficulty of procuring the moss.

EXPERIMENTS WITH POTATOES.—Mr. J. V. H. Scovel, of Paris, Oneida County, New York, sends the following report of his experiments with potatoes:

I send the result of some experiments in the culture of potatoes, made the past season, 1873. We are too apt to accept conclusions which appear plausible or reasonable without

taking the trouble to investigate and determine by experiment whether actual results in field practice will confirm those impressions. I have for several years flattered myself that there was something in intelligently cutting potatoes for seed, and yet, while I strongly urge the importance of selecting only good, sound, well-matured potatoes for planting, I now fear that my theory of *intelligence in the cutting* of tubers is in danger of being entirely upset when reduced to actual practice. If so, a great point is gained. It demonstrates that, without detriment, machines may be employed for cutting, dropping, and covering; thus dispensing with a large amount of hand-labor. One of the main ideas in conducting these experiments was to determine the best method of cutting and preparing seed, and its relative bearing upon the yield and value of the harvested crop.

The variety used for this purpose was the "Oneida peachblow," a seedling of the Garnet Chili; the latter having been the main variety cultivated in this locality for several years past. I prefer this peachblow to the Chili, because it is a better-looking potato, better for the table, and far more prolific. It originated in this immediate vicinity, and is well adapted to our locality, elevated about 1,500 feet above sea-level, and to our short seasons. The plat selected for experimenting was well manured the previous season with rotted barn-yard manure, and planted to sowed corn. The soil would be termed a clay-loam. The plowing was done early in May. The ground was furrowed with a light plow, 3 feet apart in rows, and planted 2 feet 9 inches by 3 feet, making 5,280 hills to an acre. The planting was commenced May 21, and the potatoes were dug October 14 and 15. The result is figured out as if by the acre, and the number of bushels given in each column upon the basis of 60 pounds to the bushel.

Season of 1873.

Kind and quantity of seed in the hill.		Seed used per acre.	Product, 60 pounds to the bushel.		
			Large.	Small.	Total.
		<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bush.</i>
No. 1.	One eye to a piece and one piece in a hill.....	2 1-3	136 1-4	(*)	136 1-4
No. 2.	One eye to a piece and two pieces in a hill.....	6	189	7	196
No. 3.	Two eyes to a piece and one piece in a hill.....	6	191 1-2	10	201 1-2
No. 4.	Two eyes to a piece and two pieces in a hill.....	12 1-3	257	16	273
No. 5.	Three eyes to a piece and one piece in a hill.....	8 1-5	214	7	221
No. 6.	Three eyes to a piece and two pieces in a hill.....	15 5-6	259 2-3	14	273 2-3
No. 7.	Four eyes to a piece and one piece in a hill.....	11 4-5	232 1-2	14 1-2	247
No. 8.	Four eyes to a piece and two pieces in a hill.....	21 1-6	295	17 1-2	312
No. 9.	Five eyes to a piece and one piece in a hill.....	14	258 1-2	16 1-2	275 1-2
No. 10.	One large potato.....	43 1-2	305 1-2	43 1-2	349
No. 11.	One large potato, cut in two lengthwise, one piece in a hill.....	21 1-6	263	20	283
No. 12.	One medium potato.....	25 1-4	289	18 4-5	307 4-5
No. 13.	One medium potato divided, two pieces in a hill.....	27	300	27	327
No. 14.	One medium potato, cut twice in two, and four pieces in a hill.....	28 1-5	269	33	302
No. 15.	One medium potato, cut in two, one piece in a hill.....	15 1-4	262	12	274
No. 16.	Seed end.....	10 1-2	259 1-2	20	269 1-2
No. 17.	Stem end.....	21 1-6	289	20	309
No. 18.	One small potato.....	11 5-6	250 1-4	23	273 1-4
No. 19.	One small potato, divided, two pieces in a hill.....	11 5-6	272 1-2	16 1-2	289
No. 20.	One small potato, divided, one piece in a hill.....	6 1-2	230 1-5	8 1-5	238 2-5
No. 21.	One medium potato cut to single eyes.....	30 1-2	262	70 1-2	332 1-2
No. 22.	One good-sized potato, eyes dug out, thirty hills missing.....	33	134	16 1-2	150 1-2
No. 23.	Garnet Chili, one good-sized potato, eyes dug out, 22 hills missing.....	35 1-4	155 1-2	10 1-2	166
No. 24.	Thirty-eight hills planted with the parings of single potato, pared quite thickly.†	.....	195	37 1-2	232 1-2
No. 25.	Thirty-eight hills, (Garnet Chili,) planted with the parings of single potatoes as noted above.†	.....	171 1-2	40	211 1-2
No. 26.	Seventy four hills were planted out of the 76 potatoes, thickly pared, as noted above, and of these 10 hills grew, but were late in coming up, and the crop from these 10 hills was 19 potatoes, weighing 11 pounds.	.....	.....	.....	.....

* Only three or four small potatoes.

† These hills were throughout the season later and less vigorous in their growth than those cut in the ordinary manner.

Except as noted above, one row of each kind was planted, containing 75 hills, and the result presented as if by the acre.

The cuttings of the first nine rows were rolled in plaster, and in the remaining rows, with the exception of No. 10, about a tablespoonful of plaster was thrown upon the potato in the hill previous to covering. It was calculated to make them all about uniform in this respect. The culture was ordinary field-culture.

At harvest-time, in No. 1, planted with one eye to a piece, several hills had only one good-sized potato, several only two, and very few had three. In this row there were only three or four small potatoes. The difference in yield, as presented in Nos. 1 and 2, between one and two single eyes in a hill, is 60 bushels. Comparison between Nos. 3 and 4, having two eyes to a piece and one or two pieces in a hill, shows a difference in favor of the latter of $71\frac{1}{2}$ bushels. Between Nos. 5 and 6, having three eyes to a piece and one and two pieces in a hill, the difference in favor of the stronger seeding is $53\frac{3}{4}$ bushels. The difference in Nos. 7 and 8, with four eyes to a piece, is in favor of No. 8 by $65\frac{1}{2}$ bushels; while between this and No. 9, with only one piece in a hill, is a falling off of $37\frac{1}{2}$ bushels.

Concerning No. 9, care was taken that no piece should be planted having more than five eyes, and in my memorandum, at the time of planting, I find this note: "Requiring much care in cutting, and but few of the seed-ends left in."

The largest yield was that of No. 10, (and if I remember rightly no plaster was put in these hills,) 349 bushels requiring $43\frac{1}{2}$ bushels of seed. Between Nos. 10 and 11 the potatoes were equal in size, but the latter yielded 66 bushels less per acre. Again, simply a difference in cutting seed shows between Nos. 12 and 13 an increased yield of 20 bushels in No. 13, with only an increase of $1\frac{1}{2}$ bushels of seed; while too much cutting, as in No. 14, shows a diminished yield of 25 bushels as compared with No. 13.

The second largest yield, No. 21, shows an undue proportion of small potatoes, $70\frac{1}{2}$ bushels. This was doubtless owing to the fact that each eye grew independently, and in many of the hills there were 18 or 20 different stalks.

Again, the difference in favor of stronger seeding is plainly marked in Nos. 19 and 20, with small undeveloped tubers cut in two and planted one and two pieces in a hill, in favor of the latter, by 50 1-5 bushels.

Is the seed-end better than the stem-end for planting? If a potato is planted whole, the eyes on the seed-end are those mainly which send forth shoots, the larger proportion remaining dormant; but cut the potato, and those eyes which in the uncut tuber do not germinate, send forth shoots, and are equally healthy and prolific. In a comparison of Nos. 16 and 17, which were the same potatoes except that the seed and stem-ends were planted in rows by themselves, the latter shows nearly double the weight of seed used, and an increased yield of $39\frac{1}{2}$ bushels.

In Nos. 21 and 22, a large proportion of missing hills is shown. From each potato was cut out, with a sharp-pointed knife, every eye, or indication of an eye, which could be seen without the aid of a magnifying-glass. As a general rule, these potatoes came up slowly, some not making their appearance till the latter part of July; and, considering the disadvantages under which they grew, and the number of missing hills, the average yield is quite large. I do not pretend to affirm that this system of treatment is favorable to a prolific yield, but one of these hills contained 83 potatoes, large and small, and the largest one would weigh nearly $1\frac{1}{2}$ pounds.

In seasons of great scarcity with the poor the inside of the potato may be eaten, and, if pared thickly, the parings planted. But the practice should not be commended, as the result in No. 25 evidently shows that by this process the vitality of the tuber is impaired.

My universal practice, for field-culture, has been to select medium-sized but well-developed tubers, and if not too large, plant them whole; otherwise, cut them lengthwise into two, and rarely into three pieces. The general practice in this locality is what may be termed surface-culture. The seed-bed is well prepared, the ground marked off with a horse-marker, and the potatoes pressed into the ground with the foot, and covered with the hoe. As soon as they are up sufficiently to indicate the rows, the cultivator is run between them, and they receive a slight hoeing. With the second hoeing is included the process of hilling, and the cultivation is finished.

DIVISION OF LABOR IN AGRICULTURE. A communication to this Department, from Mr. Daniel R. Goodloe, of Warren County, North Carolina, advocates a greater division of labor in farming. The following is a condensation of the considerations presented: All branches of mechanical industry depend largely for capital and skill in carrying them on, and for consequent profitable results, on a judicious division of labor. Were there a class of producers of wearing-apparel who undertook to manufacture all varieties of cloths, buttons, thread, leather, boots, shoes, hats, bonnets, and garments of all sorts, for men, women, and children, the demand for capital would be too great, and for intelligence and skill too multiform, for the capacities of any one person. Yet this is not unlike what the farmer undertakes under the

present system. In order to the highest success and profit in his business, he needs to be posted in agricultural chemistry, botany, and entomology; the nature of different soils and the best mode of treating them; the relative values and effects of all varieties of fertilizers; the best processes of tilling and culture for each kind of crop; the comparative profit in raising them; the relation of supply and demand in market for each; the adaptation of all varieties of grains, grasses, vegetables, and fruits to soil and climate; the breeds, characteristics, and relative adaptation and profits of all kinds of farm-animals; and so on, almost without limit. And then, in addition to these demands for manifold intelligence and manifold skill in applying it to departments of agriculture so distinct and varied that they are equivalent to a dozen distinct arts in mechanics, there is the further demand for sufficient capital to carry on all these branches advantageously. "Is it surprising, under such circumstances, that country-life and agriculture are so little attractive? Can we wonder that capital and population accumulate in the cities and towns out of all proportion to what they do in the country?"

Some steps have already been taken in the division of agricultural labor, greatly to the advantage of the farmer. At a remote period every farmer ground his own grain by hand; at a period comparatively recent every farmer thrashed out his own grain. Now, at much less trouble and expense to the farmer, thrashing is done very extensively by those who make that a business. Formerly, each farmer had to keep great teams and wagons, and spend a large share of time in hauling his products; it might be a hundred miles, to market, and hauling back his supplies; now this is generally done by the railroads, and "at a third or fourth of the former cost." Is it not practicable to carry this division of labor in farming still further, and thus, by a greater concentration of capital and skill employed in agriculture, to bring back to the rural districts a portion of the wealth and population which have been drawn off from them to the cities? For example, may not that fundamental branch of successful farming, plowing, be done, at least to a wide extent, much better and much cheaper than it now is, by a class who shall concentrate capital and skill on that as a distinct business?

"So long as agriculture depends on individual enterprise, steam-plowing will be regarded as impracticable. It requires too much capital, and its capabilities are too colossal for individual farmers in connection with all other farm-work. There may be a few who possess sufficient means to make the experiment on a small scale; but in order to success, it must be done on a scale sufficiently large to make that the business." Mr. Goodloe recognizes the fact that the business of plowing would not last all the year round, but thinks that the same company that should do the plowing could profitably apply the steam-power to various other uses; among which are specified thrashing and grinding grain, sawing lumber, pulling stumps, picking and packing cotton, and manufacturing sugar. He believes that such a division of labor, once introduced, would result in the formation of companies for the use of steam in agriculture, who would have the requisite capital, intelligence, and enterprise for bringing science to their aid, would make plowing by steam and improvements therein a thorough study, and consequently would effect, throughout the sphere of their operations, a large increase in the productiveness of the soil and profits of farming. "Deep plowing and subsoiling would everywhere and thoroughly be introduced," and the expenses for teams, plows, &c., would be so diminished as to enable "thousands of laboring-men to set up as farmers, who, under the present system, are unable to do so."

MARKET-PRICES OF FARM-PRODUCTS.

The following quotations represent the state of the market, as nearly as practicable, at the beginning of the month.

Articles.	Prices.	Articles.	Prices.
NEW YORK.		BOSTON—Continued.	
Flour, superfine.....per bar.	\$5 00 to \$5 50	Sugar, fair to good refining...do..	\$0 7½ to \$0 8
extra State.....do..	5 85 to 6 55	Tobacco, lugs.....do..	6½ to 8
superfine western.....do..	5 00 to 5 50	common to medium	
extra to choice western,		leaf.....do..	8½ to 10
per barrel.....do..	5 75 to 11 00	Cotton, ordinary to good ordi-	
common to fair southern		nary.....do..	14½ to 16½
extra, per barrel.....do..	6 00 to 6 70	low middling to good	
good to choice southern,		middling.....do..	17 to 29
per barrel.....do..	6 75 to 11 00	Wool, Ohio and Pennsyl-	
Wheat, No. 1 spring.....per bush.	1 40 to 1 43½	vania.....do..	49 to 60
No. 2 spring.....do..	1 34 to 1 39	Michigan.....do..	45 to 53
winter, red, western.....do..	1 37 to 1 40	other western.....do..	44 to 52
winter, amber, western,		pulled.....do..	25 to 56
per bushel.....do..	1 40 to 1 44	combing fleece.....do..	57 to 62
winter, white, western,		California.....do..	20 to 40
per bushel.....do..	1 42 to 1 60	Texas.....do..	25 to 40
Rye.....do..	1 10 to —	PHILADELPHIA.	
Barley.....do..	— to —	Flour, superfine.....per bbl.	4 70 to —
Corn.....do..	74 to 87	Penn. extra.....do..	5 00 to 5 50
Oats.....do..	56 to 63	Penn. family and	
Hay, first quality.....per ton.	23 00 to 28 00	fancy.....do..	6 50 to 7 50
second quality.....do..	20 00 to 21 00	western extra.....do..	5 00 to 5 50
Beef, mess.....per bbl.	— to —	western family and	
extra mess.....do..	14 60 to 15 00	fancy.....do..	6 50 to 7 75
Pork, mess.....do..	18 50 to —	Wheat, winter, red.....per bush..	1 30 to 1 40
extra prime.....do..	16 25 to —	winter, amber.....do..	1 52 to 1 58
prime mess.....do..	17 00 to —	winter, white.....do..	— to —
Lard.....do..	10½ to 12	spring.....do..	— to —
Butter, western.....do..	15 to 27	Rye.....do..	98 to 1 00
State dairy.....do..	20 to 30	Barley.....do..	— to —
Cheese, State factory.....do..	12½ to 14½	Corn.....do..	79 to 81
western factory.....do..	11½ to 13	Oats.....do..	61 to 67½
Cotton, ordinary to good ordinary,		Hay, fresh baled.....per ton	22 00 to 24 00
per pound.....do..	14½ to 16½	common to fair ship-	
low middling to good mid-		ping.....do..	20 00 to 22 00
dling, per pound.....do..	16½ to 19½	Beef, western mess.....per bbl	8 00 to 10 00
Sugar, fair to good refining, per lb.	— to —	extra mess.....do..	9 00 to 12 00
prime refining.....do..	8½ to 8½	Wartman's city fam-	
Tobacco, lugs.....do..	5½ to 7½	ily.....do..	17 00 to —
common to medium		Pork, mess.....do..	18 25 to 18 50
leaf, per pound.....do..	7½ to 10½	prime mess.....do..	16 50 to —
Wool, American XXX and pick-		prime.....do..	15 00 to —
lock.....per lb.	51 to 63	Lard.....do..	11 to 15
American X and XX.....do..	47 to 55	Butter, choice middle State.....do..	25 to 30
American combing.....do..	50 to 65	choice western.....do..	22 to 24
pulled.....do..	46 to 52	Cheese, New York factory.....do..	14 to 15
California spring-clip.....do..	20 to 37	Ohio factory.....do..	12½ to 13
California fall-clip.....do..	17 to 28	Sugar, fair to good refining.....do..	7½ to —
BOSTON.		Cotton, ordinary to good ordinary,	
Flour, superfine western.....per bbl.	5 00 to 5 25	per pound.....do..	14 to 16
western extras.....do..	6 00 to 8 00	low middling to good mid-	
western choice.....do..	8 50 to 9 50	dling.....per lb.	16½ to 19½
southern extras.....do..	6 00 to 6 25	Wool, Ohio X and XX.....do..	53 to 56
choice Baltimore.....do..	8 50 to 9 50	Ohio combing.....do..	62½ to —
Wheat.....per bush.	1 50 to 1 85	pulled.....do..	42 to 48
Rye.....do..	1 15 to 1 20	unwashed, clothing and	
Barley.....do..	— to —	combing.....per lb.	36 to 43
Corn.....do..	84 to 86	BALTIMORE.	
Oats.....do..	61 to 69	Flour, superfine.....per bbl.	4 00 to 4 75
Hay, eastern and northern.....per ton.	12 00 to 25 00	extra.....do..	5 00 to 7 50
western choice.....do..	23 00 to 24 00	family and fancy.....do..	8 00 to 9 50
Beef, western mess.....per bbl.	13 00 to 14 00	White wheat.....per bush.	1 50 to 1 65
western mess extra.....do..	15 00 to 15 50	amber.....do..	— to 1 62
Pork, prime.....do..	19 00 to 19 50	red.....do..	1 30 to 1 65
mess.....do..	16 00 to 16 50	Rye.....do..	90 to 95
Lard.....do..	12 to 12½	Corn, white southern.....do..	90 to 91
Butter, New York and Ver-		yellow southern.....do..	83 to —
mont.....do..	20 to 29	Oats, southern.....do..	65 to 72
western.....do..	18 to 25	western.....do..	65 to 68
Cheese, New York and Ver-		Hay, Pennsylvania.....per ton.	16 00 to 20 00
mont.....do..	13 to 14	Maryland.....do..	16 00 to 23 00
western factory.....do..	10 to 13½		

Market-prices of farm-products—Continued.

Articles.	Prices.	Articles.	Prices.
BALTIMORE—Continued.		CHICAGO—Continued.	
Hay, western.....per ton.	\$17 00 to \$22 00	Butter, choice to fancy...per lb.	\$0 21 to \$0 24
Beef, Baltimore mess.....per bbl.	— to —	medium to good.....do.	16 to 18
extra.....do.	— to —	Cheese, New York factory...do.	11 to 12
Pork, mess.....do.	18 00 to —	Ohio and western factory,	
Lard.....per lb.	12 to 12½	per pound.....do.	10½ to 11
Butter, western.....do.	23 to 25	Sugar, New Orleans, prime to	
eastern.....do.	20 to 23	choice.....per lb.	— to —
Cheese, eastern cutting.....do.	15 to —	Sugar, New Orleans, common to	
western cutting.....do.	12½ to 13½	fair.....per lb.	— to —
Sugar, fair to good refining.....do.	7½ to 8	Wool, tub-washed.....do.	45 to 50
Tobacco, lugs.....do.	4½ to 6	fleece-washed.....do.	38 to 44
common to medium.....do.	6 to 8½	unwashed.....do.	27 to 33
Cotton, ordinary to good ordi-		pulled.....do.	— to —
nary.....per lb.	— to 15½		
low middling to middling,		SAINT LOUIS.	
per pound.....do.	16½ to 17½	Flour, spring.....do.	— to —
Wool, fleece-washed.....do.	— to —	winter.....do.	3 75 to 8 00
tub-washed.....do.	— to —	Wheat, red winter.....do.	1 08 to 1 30
unwashed.....do.	— to —	white winter.....do.	1 20 to 1 37½
pulled.....do.	— to —	spring.....do.	— to —
CINCINNATI.		Corn.....do.	58 to 75
Flour, superfine.....per bbl.	4 75 to 5 00	Rye.....do.	75 to 87½
extra.....do.	5 50 to 5 75	Oats.....do.	46½ to 53
family and fancy.....do.	5 60 to 6 00	Barley.....per bush.	— to —
Wheat, red winter.....per bush.	1 18 to 1 20	Hay, timothy.....per ton.	15 00 to 25 00
hill winter.....do.	— to —	Beef, prime mess.....per bbl.	12 00 to —
white winter.....do.	1 20 to 1 23	mess.....do.	12 00 to —
Rye.....do.	90 to —	extra mess.....do.	14 00 to —
Barley.....do.	— to —	Lard.....per lb.	10 to 12½
Corn.....do.	55 to 71	Butter, choice.....do.	20 to 23
Oats.....do.	48 to 56	inferior grades.....do.	16 to 18
Hay, baled, No. 1.....per ton.	17 00 to 20 00	Cheese, Ohio and N. W.	
lower grades.....do.	10 00 to 14 00	factory.....do.	12 to 13½
Beef, plate.....per bbl.	13 00 to 14 50	New York factory.....do.	13 to 13½
Pork, mess.....do.	18 00 to 18 25	Sugar, New Orleans, common	
Lard.....per lb.	11½ to 12	to fair.....do.	8 to —
Butter, choice.....per lb.	18 to 20	prime to choice.....do.	— to 8½
prime.....do.	22 to 23	Cotton, ordinary to good ordi-	
Cheese, factory.....do.	12 to 12½	nary.....do.	— to —
prime apple.....do.	— to —	low middling to good	
Sugar, New Orleans, fair to good,		middling.....do.	15½ to 18½
per pound.....do.	8½ to 9½	Wool, tub-washed.....do.	46 to 51
prime to choice.....per lb.	9½ to 9¾	unwashed, combing.....do.	36 to 38
Tobacco, lugs.....do.	9 to 20	fleece-washed.....do.	— to —
leaf.....do.	12 to 34½		
Cotton, ordinary to good ordinary,		NEW ORLEANS.	
per pound.....do.	13½ to 15	Flour, superfine.....per bbl.	5 00 to —
low middling to good mid-		extra.....do.	5 50 to 6 50
dling.....per lb.	16 to 18½	choice to fancy.....do.	7 00 to 8 75
Wool, fleece-washed.....do.	40 to 43	Corn, yellow.....per bush.	81 to —
tub washed.....do.	44 to 46	white.....do.	82 to 85
unwashed, clothing.....do.	30 to 31	Oats.....do.	62 to 64
unwashed, combing.....do.	35 to 38	Hay, choice.....per ton.	— to —
pulled.....do.	32 to 33	prime.....do.	24 00 to 25 00
CHICAGO.		Beef, Texas.....per bbl.	12 00 to 12 25
Flour, white winter, fair to good,		Philadelphia.....do.	— to —
per barrel.....do.	6 00 to 6 50	Fulton market, per half bbl.	11 25 to 11 50
choice.....per bbl.	7 00 to 8 00	western.....per bbl.	15 50 to 16 00
red winter.....do.	5 50 to 6 50	Pork, mess.....do.	20 00 to 21 00
medium to fancy, spring ex-		Lard.....per pound.	12 to 12½
tras.....per bbl.	5 00 to 6 50	Butter, choice Goshen.....do.	32 to 34
spring, superfine.....do.	3 50 to 4 75	western.....do.	17 to 22
Wheat, No. 1 spring.....per bush.	1 19 to 1 19½	Cheese, choice western fac-	
No. 2 spring.....do.	1 16 to 1 16½	tory.....do.	16 to —
No. 3 spring.....do.	1 09½ to 1 10	New York cream.....do.	— to —
Corn, No. 2.....do.	53 to 59	Sugar, fair to fully fair.....do.	8 to 8½
Oats, No. 2.....do.	42 to 43½	prime to strictly	
Barley, No. 2.....do.	1 10 to 1 20	clarified, white and	
Rye, No. 2.....do.	83 to 86	yellow.....do.	10½ to —
Hay, timothy.....per ton.	11 50 to 14 00	Tobacco, lugs.....do.	5½ to 7½
prairie.....do.	7 50 to 9 00	low leaf to me-	
Beef, mess.....per bbl.	11 00 to 11 25	dium leaf.....do.	8 to 9½
extra mess.....do.	12 00 to 12 25	Cotton, ordinary to good	
Pork, mess.....do.	17 70 to 17 75	ordinary.....do.	12½ to 14½
prime, mess.....do.	— to —	low middling to	
extra prime.....do.	— to —	good middling.....do.	15½ to 18½
Lard.....per lb.	11-10 to 11½	Wool, lake.....do.	34 to —

Market-prices of farm-products—Continued.

Articles.	Prices.	Articles.	Prices.
SAN FRANCISCO.		SAN FRANCISCO—Continued.	
Flour, superfine.....per bbl.	\$4 50 to \$4 75	Beef, family mess.....half bbl.	\$10 00 to \$12 00
extra.....do.	5 00 to 5 50	Pork, mess.....per bbl.	19 00 to 20 00
family and fancy.....do.	5 50 to 6 00	prime mess.....do.	16 50 to —
Wheat, California.....per cental.	1 65 to 1 85	Lard.....per lb.	12 to 13 $\frac{1}{2}$
Oregon.....do.	1 65 to 1 85	Butter, overland.....do.	20 to 22
Barley.....do.	1 00 to 1 75	California.....do.	25 to 30
Oats.....do.	1 50 to 1 75	Oregon.....do.	18 to 20
Corn, yellow.....do.	1 90 to 2 00	Cheese.....do.	12 $\frac{1}{2}$ to 16
white.....do.	1 90 to 2 00	Wool, native.....do.	17 to 19
Hay, State.....per ton.	10 00 to 14 00	California.....do.	25 to 32
Beef, mess.....per bbl.	8 50 to 9 00	Oregon.....do.	25 to 32

LIVE-STOCK MARKETS.

Articles.	Value.	Articles.	Prices.
NEW YORK.		CHICAGO—Continued.	
Cattle, extra beeves... per cental	— — \$12 75	Cattle, choice beeves, 3 to 5 y. ars old, 1,250 to 1,950 pounds, per cental.....	\$5 85 to \$6 10
good to prime.....do.	\$10 25 — —	good beeves, 1,200 to 1,300 pounds.....per cental	5 50 to 5 75
comon to fair.....do.	— — — —	medium grades, 1,150 to 1,300 pounds, per cental	4 75 to 5 40
milk-cows.....per head	40 00 to 80 00	lower grades, natives, per cental.....	2 00 to 4 75
calves.....per cental	7 00 to 8 00	Texans, choice corn-fed, per cental.....	5 00 to 5 50
Sheep, good to extra.....do.	4 50 to 5 50	Texans, north wintered, per cental.....	3 50 to 4 25
Swine, common to fair.....do.	— — 5 87 $\frac{1}{2}$	Texans, through-droves, per cental.....	1 50 to 3 25
BOSTON.		milk-cows.....per head	— — — —
Cattle, choice.....per cental	— — — —	veal calves.....per cental	— — — —
extra.....do.	— — — —	Sheep, poor to medium.....do.	2 00 to 2 50
first quality.....do.	— — — —	good to choice.....do.	3 75 to 4 50
second quality.....do.	— — — —	Swine, good to extra.....do.	5 85 to 6 15
third quality.....do.	— — — —	inferior to medium.....do.	5 30 to 5 65
working-oxen.....per pair	— — — —	SAINT LOUIS.	
milk-cows with calves per head.....	— — — —	Cattle, choice native steers, 1,300 to 1,600 pounds, per cental	6 00 to 6 25
yearlings.....per head	— — — —	prime second class, 1,150 to 1,400 pounds, per cental	5 00 to 5 25
Sheep, extra.....do.	— — — —	good third grade, 1,050 to 1,300 pounds, per cental	4 10 to 4 25
inferior grades.....do.	— — — —	fair butchers', 1,000 to 1,200 pounds, per cental.....	3 50 to 4 00
Swine,.....per cental	— — — —	inferior native grades, per cental.....	2 00 to 3 75
PHILADELPHIA.		Texans and Cherokees, corn-fattened, per cental	3 00 to 3 75
Cattle, beeves.....per cental	\$4 50 to \$7 62 $\frac{1}{2}$	inferior.....per cental	1 25 to 2 00
Sheep.....do.	4 25 to 6 00	Sheep.....do.	2 50 to 6 00
Swine.....do.	8 75 to 9 00	Swine.....do.	5 00 to 6 00
BALTIMORE.		Horses, plug.....per head	20 00 to 35 00
Cattle, best beeves... per cental	6 00 to 7 00	street-car horses.....do.	55 00 to 75 00
first quality.....do.	4 75 to 6 00	good work-animals.....do.	80 00 to 120 00
medium.....do.	4 25 to 4 75	driving animals.....do.	150 00 to 200 00
ordinary.....do.	4 00 to 4 25	heavy draught.....do.	115 00 to 200 00
general average.....do.	5 75 — —	Mules, 14 to 15 hands high, do.	70 00 to 135 00
most of the sales be- tween.....per cental	5 00 to 6 25	15 to 16 hands high, do.	140 00 to 170 00
Sheep.....do.	4 00 to 5 25	extra.....do.	165 00 to 190 00
Swine, corn-fed.....do.	7 75 to 8 00	NEW ORLEANS.	
CINCINNATI.		Cattle, Texas beeves, choice, per head.....	40 00 to 45 00
Cattle, good to prime, butchers' steers.....per cental	4 25 to 5 25	first quality.....do.	35 00 to 40 00
common to good, medium, per cental.....	1 75 to 4 00	second quality.....do.	20 00 to 25 00
milk-cows.....per head	30 00 to 50 00	western beeves, per cental	— — — —
Sheep, common.....per cental	3 00 to 4 00	milk-cows.....per head	35 00 to 100 00
good to prime, butchers', per cental.....	3 75 to 5 75	calves.....do.	7 00 to 10 00
Swine, shipping grades, per cen- tal.....	5 85 to 6 05	Sheep, first quality.....do.	4 00 to 5 00
good to prime, butchers', per cental.....	6 10 to 6 30	second quality.....do.	3 00 to 4 00
CHICAGO.		Swine.....per cental	7 00 to 7 50
Cattle, extra graded steers, 1,400 to 1,500 pounds, per cental.....	6 25 to 6 50		

FOREIGN MARKETS.

WHEAT.—The forcing weather of the first part of June, in England, brought the wheat-crop into a critical state for the recurrence of wintry coldness in the middle of the month. The consequent injury to the grain and the deferring of the harvest made the lightness of the stocks of old wheat a matter of serious anxiety. Rains in France appear to have improved the prospects of the wheat-crop, depressing the markets about 1 shilling per quarter. This downward tendency, however, was by no means permanent. Contracts for the delivery of flour and wheat on the continent show a large abatement from present high rates, but such is the critical character of the times that a revulsion toward higher rates is feared. The rapid clearing out of British stores is shown in the fact that the deliveries of the third week in June are 8,805 quarters below those of the corresponding week of 1873, and the weekly imports fail to make up the deficiency. Prices continue measurably unchanged in Belgium, Holland, and Germany, but the improved prospects of the crop have depressed prices 1 shilling per quarter in the Hungarian markets.

The sales of English wheat during the week amounted to 36,002 quarters, at an average of 61s. 4d. against 44,807 quarters at 58s. 4d. during the corresponding week of 1873. The London averages were 63s. 2d. on 1,278 quarters. The imports into the United Kingdom during the week previous were 444,480 cwt. The show of fresh English samples grows more meager each week, yet millers hesitate to purchase at ruling prices. In Mark Lane, Essex and Kent, white is quoted at 53s. to 66s. per quarter; ditto red 55s. to 63s.; Norfolk, Lincolnshire, and Yorkshire red, 55s. to 61s. Of foreign wheats Dantzic mixed brings from 60s. to 68s. Königsberg, 59s. to 67s.; Rostock, 63s. to 68s.; Silesian red, 58s. to 65s.; Pomerania Mecklenburg, and Uckermark, red, 59s. to 60s.; Ghirka, 55s. to 66s.; Russian hard, 52s. to 55s.; Saxonska, 57s. to 59s.; Danish and Holstein, red, 58s. to 59s.; American, 55s. to 59s.; Chilian, white, 63s.; California, 64s.; Australian, 62s. to 65s. At Paris farmers' parcels are quoted at 71s. 6d. to 73s.; at Havre, Rouen, and Dunkirk, Oregon brings 70s.; California, 69s.; Chilian, 68s.; American spring, 62s. 6d.; Polish, 61s. 6d. At Liverpool, American white is quoted at 12s. 6d. to 13s. per cental; red winter and southern, at 11s. 9d. to 12s.; spring, No. 1, 11s. 2d. to 11s. 4d.; spring No. 2, 10s. 8d. to 11d. Canadian white, 12s. 4d. to 12s. 6d.; ditto, red, 11s. 4d. to 11s. 9d.; California, white, 12s. 6d. to 13s. 2d.; Chilian, 12s. 3d. to 12s. 4d.; Australian, 13s. 6d. to 13s. 9d.; Spanish, white, 12s. to 12s. 2d.; Danubian, 7s. 6d. to 9s. 6d.; Egyptian, 10s. 3d. to 12s.

FLOUR.—The imports of flour into the United Kingdom during the week ending June 13th amounted to 104,172 cwt. The supply of English flour at the opening of the following week, in London, was moderate, but the import was increasing. In Mark Lane the best town households brought 47s. to 54s. per sack of 280 pounds; best country households, 44s. to 47s.; Norfolk and Suffolk, 38s. to 43s.; American, per barrel of 196 pounds, 28s. to 30s.; extra and double extra, 29s. to 33s. In Paris, the rates for consumption were 52s. to 54s. per 280 pounds. The "eight-marks" for June closed at 53s. 2d.; Superior flour was weak at 52s. 4d. for June.

MAIZE.—There was a fair supply of maize in London, but a brisk inquiry soon hardened prices; in Mark Lane white was quoted at 41s. to 44s. per quarter; yellow 37s. to 39s. At Liverpool, American white brought 38s. to 38s. 6d. per 480 pounds; mixed, white and yellow, 36s. to 36s. 6d.; Galatz, 43s. 6d. to 44s.

